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A

NATURAL ARRANGEMENT

OF

BRITISH PLANTS,

ACCORDING TO THEIR RELATIONS TO EACH OTHER,

AS POINTED OUT BY

JUSSIEU, DE CANDOLLE, BROWN, &c.

INCLUDING

THOSE CULTIVATED FOR USE;

WITH

AN INTRODUCTION TO BOTANY,

IN WHICH THE TERMS NEWLY INTRODUCED ARE EXPLAINED;

ILLUSTRATED BY FIGURES.

BY

SAMUEL FREDERICK GRAY,

Lecturer on Botany, the Materia Medica, and Pharmaceutic Chemistry.

VOL. II.

LONDON:

PRINTED FOR BALDWIN, CRADOCK, AND JOY,

PATERNOSTER-ROW.

1821.

" Then spring the living herbs, profusely wild,
O'er all the deep-green earth, *that task* * the power
Of botanist to number up their tribes:
Whether he steals along the lonely dale,
In silent search; or through the forest, rank
With what the dull incurious weeds account,
Bursts his blind way; or climbs the mountain rock,
Fir'd by the nodding verdure of its brow.
With such a liberal hand has nature flung
Their seeds abroad, blown them about in winds,
Innumerous, mix'd them with the nursing mould,
The moistening current, and prolific rain."

THOMSON.—*Spring.*

* *beyond*, in original.

C. Baldwin, Printer,
New Bridge-street, London.

QK
306
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SCNHRB

An Arrangement of the Families, and of the anomalous Genera of phenogamous Plants, according to their sexual Organs.

I. Stamen 1, *on the receptacle or perianthium.*

Style 1; *perianth.* 0, or simple.	Fluviatiles, 2,	6.
	Charadeæ, 2,	5.
	Chenopodeæ, 3,	16.
	Halorageæ, 3,	55.
	Agrimoniaceæ, 3,	59.
Style 1; *perianth.* double; *petal* 1	Valerianeæ, 3,	41.
Styles 2; *pet.* 2; *capsule* 4-celled	*Callitriche*, 3,	338.
Styles 2; *perianth.* glumaceous	*Vulpia*, 2,	64.
Styles 3	Euphorbiaceæ, 3,	10.
Styles 4	*Zannichellia*, 2,	24.

2. Stamens 1 *or* 2 *on the pistill.*

Stamen 1	Orchideæ, 2,	21.
Stamens 2	*Cypripedium*, 2,	150.

3. Stamens 2, *on the receptacle or perianthium.*

Style 1; *flow.* above; *pet.* 2	*Circæa*, 3,	341.
Style 1; *flow.* below; *pet.* 1. regular	Oleineæ, 3,	34.
Style 1; *fl.* bel.; *pet.* 1, irreg. *caps.* 2-celled	*Veronica*, 3,	64.
Style 1; *fl.* bel.; *pet.* 1, irreg. *caps.* 1-celled	Lentibulariæ, 3,	24.
Style 1; *fl.* bel.; *pet.* 1, irreg. *seeds* 4, naked	Labiatæ, 3,	32.
Style 1; *fl.* bel.; *pet.* 1, irreg. *samare* 2-seeded	Fraxineæ, 3,	35.
Style 1; *fl.* bel.; *pet.* 0 or 4; *pod* 2-celled	*Coronopus*, 3,	434.
	Lepidium, 3,	441.
Style 1; *fl.* bel.; *pet.* 0; *seeds* immersed in calyx	*Salicornia*, 3,	45.
Style 1; *fl.* bel.; *pet.* 0; *seeds* arillated?	Lemnadeæ, 2,	7*.
Style 1; *fl.* bel.; *perianthium* glumaceous	*Rhyncospora*, 2,	38.
	Tricophorum, 2,	43.
Styles 2	Gramineæ, 2,	10.

4. Stamens 3.

St. 1; *perianth.* above, double; *peric.* 1 or 2-seeded	Valerianeæ, 3,	41.
St. 1; *perianth.* above, double; *peric.* many-celled	Cucurbitaceæ, 3,	51.
St. 1; *perianth.* above, single	Irideæ, 2,	20.
St. 1; *perianth.* below; *glumes* 1-valved	Cyperaceæ, 2,	9.
St. 1; *perianth.* below; *glumes* 2-valved	Gramineæ, 2,	10.
St. 1; *perianth.* below; *glumes* 3-valved	Typhaceæ, 2,	8.
St. 1; *perianth.* below; *glumes* 6-valved	Junceæ, 2,	12.
Styles 2	Gramineæ, 2,	10.
St. 3; *perianth.* single, calycine	Amaranthideæ, 3,	47.
St. 3; *perianth.* double; *caps.* 1; *calyx* 4-leaved	Caryophylleæ, 3,	72.
St. 3; *perianth.* double; *caps.* 1; *cal.* 5-leaved	Paronychideæ, 3,	49.
St. 3; *perianth.* double; *caps.* 1; *cal.* 3-cut	Portulaceæ, 3,	48.
St. 3; *perianth.* double; *caps.* 3 or 4	*Tillæa*, 3,	319.
Styles 9	Empetrideæ, 3,	7*.

5. Stamens 4.

A. *Style* 1 ; *perianthium* double ; *petal* 1, above.

Calyx below ; *pericarp* 1-seeded	Agrimoniaceæ, 3,	59.
Calyx below ; *pericarps* 2, 1-seeded	Restiaceæ, 2,	11.
Calyx above ; *pericarp* 1-seeded	Dipsaceæ, 3,	40.
Calyx above ; *pericarps* 2, 1-seeded	Rubiaceæ, 3,	42.
Calyx above ; *berry* 1, 3-celled	Caprifoliaceæ, 3,	43.

B. *Style* 1 ; *perianthium* double ; *petal* 1, below.

Stam. equal, long ; *capsule* 2-celled	Plantagineæ, 3,	18.
Stam. equal, long ; *capsule* 1-celled	Littorellideæ, 3,	19.
Stam. equal, short ; *capsule* 2-valved	Gentianæ, 3,	27.
Stam. equal, short ; *capsule* cut round	Primulaceæ, 3,	21.
Stam. equal, short ; *berry*	Oleineæ, 3,	34.
Stam. 2 long, 2 short ; *seeds* 4, naked	Labiatæ, 3,	32.
Stam. 2 long, 2 short ; *utriculus*, 2 or 4 seeded	Pyrenaceæ, 3,	33.
Stam. 2 long, 2 short ; *caps.* 2-celled, septitidal	Scrofularinæ, 3,	25.
Stam. 2 long, 2 short ; *caps.* 2-celled, loculicidal	Rhinanthaceæ, 3,	22.
Stam. 2 long, 2 short ; *capsule* 1-celled	Orobancheæ, 3,	23.

C. *Style* 1 ; *perianthium* double ; *petals* 4, above.

Pod 1-celled	Berberideæ, 3,	84.
Pod 2-celled	Cruciferæ, 3,	80.

D. *Style* 1 ; *perianthium* double ; *petals* 4, above.

Pericarp, a drupe	*Cornus*, 3,	261.
Pericarp, a berry	Loranthideæ, 3,	44.

E. *Style* 1 ; *perianthium* single, below.

Calyx 8-cut	Agrimoniaceæ, 3,	59.
Calyx 2 or 4 cut ; *stamens* short, irritable	Urticeæ, 3,	9.
Calyx 4-cut ; *stamens* long ; *capsule* 2-celled	Plantagineæ, 3,	18.
Calyx 4-cut ; *stamens* long ; *capsule* 1-celled	Littorellideæ, 3,	19.
Calyx 2 ; *drupe* 1-seeded	Eleagneæ, 3,	13.

F. *Style* 1 ; *perianthium* single, above.

	Santalaceæ, 3,	12.

G. *Styles* 2.

Petals 4 ; *capsule* 2-valved	*Buffonia*, 3,	401.
Petal 1 ; *capsule* cut round	Cuscutæ, 3,	30. B.
Perianth. amentaceous ; *pericarp* a cone	Betulideæ, 3,	5.
Perianth. amentaceous ; *pericarp* a berry	Myricæ, 3,	7.

H. *Styles* 3.

Capsule 3-valved	*Buxus*, 3,	27.
Capsule cut round	Amaranthideæ, 3,	17.

I. *Styles* 4.

Calyx 4-toothed ; *petals* 4 ; *berry*	Caprifoliaceæ, 3,	43.
Calyx 4-leaved ; *petals* 4 ; *capsule* 1	Caryophylleæ, 3,	72.
Calyx 4-leaved ; *petals* 4 ; *capsules* 4	Crassulaceæ, 3,	47.
Cal. 4-leaved or 0 ; *pet.* 0 ; *seeds* 4	Fluviatiles, 2,	6.

6. Stamens *five*.

A. *Style* 1 ; *petal* 1, below.

Akenia 4, naked	Borragineæ, 3,	31.
Capsule 1-celled ; *stigma* simple	Primulaceæ, 3,	21.
Capsule 1-celled ; *stigma* 2-cut	Menyantheæ, 3,	27 B.
Capsule 2-celled ; *seeds* central	Solaneæ, 3,	26.
Capsule 2-celled ; *seeds* parietal	*Erythræa*, 3,	94.

Capsule 2 or 3-celled; *seeds* basillary - Convolvulaceæ, 3, 30.
Caps. 3 or 5-celled; *seeds* central; *stam.* on the corolla - - - Polemoniaceæ, 3, 28.
Caps. 3 or 5-celled; *seeds* central; *stam.* on the receptacle - - - - Ericinæ, 3, 36.
Follicles 2, upright - - - Vincæ, 3, 29.
Berry 2-celled; *seeds* central - - Solaneæ, 3, 26.

B. *Style* 1; *petal* 1, above.

Capsule 1-celled - - - *Samolus*, 3, 63*.
Capsule 2-celled - - - Campanulaceæ, 3, 38.
Pericarpium 1-seeded - - - Compositæ, 3, 39.
Berry 1 or 2-celled - - Caprifoliaceæ, 3, 43.
Pome 2 or 3-celled - - - Cucurbitaceæ, 3, 51.
Berries 2, 1-seeded - - - Rubiaceæ, 3, 42.

C. *Style* 1; *petals* 4 or 5 below.

Berry 3-celled; *calyx* 1-leaved - - Rhamneæ, 3, 65.
Capsule 3 or 5-celled; *calyx* 1-leaved - Celastrinæ, 3, 64.
Capsule 5-celled; *calyx* 2 leaved - - Balsamineæ, 3, 66 B.
Capsule 5-celled; *corolla* spurred - - Violaceæ, 3, 78.

D. *Style* 1; *petals* 5, above.

Style 2-cut; *berry* many-seeded - - Grossulariæ, 3, 50.
Style simple; *berry* 5-nutted - - - *Hedera*, 3, 262.

E. *Style* 1; *petals* 0.

Capsule above; *calyx* 1-leaved - - Primulaceæ, 3, 21.
Capsule above; *calyx* 5-leaved - - *Illecebrum*, 3, 325.
Akenium above; *calyx* 1-leaved - - Polyganeæ, 3, 15.
Pericarp below; *calyx* 1-leaved - - Santalaceæ, 3, 12.
Seeds sunk in the calyx - - - Chenopodeæ, 3, 16.

F. *Styles* 2; *petal* 1, below.

Capsule 1-celled, valvular - - - Gentianæ, 3, 27.
Capsule 2-celled, cut round - - Cuscutæ, 3, 30 B.

G. *Styles* 2; *petals* 5, below.

Capsules 2 or 3; 2 or 3-seeded - - Celastrinæ, 3, 64.
Capsule 1, 1-seeded - - - *Herniaria*, 3, 327.

H. *Styles* 2; *petals* 5, above.

Pericarps 2, 1-seeded - - - Umbelliferæ, 3, 45.

I. *Styles* 2; *petals* 0.

Seeds sunk in the calyx - - - Chenopodeæ, 3, 16.
Capsule 1-seeded - - - *Scleranthus*, 3, 323.
Samare compressed - - - Ulmaceæ, 3, 8.
Pericarp below, 1-seeded - - *Xanthium*, 3, 21.

K. *Styles* 3; *petals* 4 or 5; *calyx* above.

Caprifoliaceæ, 3, 43.

L. *Styles* 3; *petals* 5; *calyx* below.

Capsules 2 or 3, inflated - - - Celastrinæ, 3, 64.
Capsule 3-valved; *seeds* woolly - - Tamaricinæ, 3, 53.
Capsule 1-celled; *seeds* naked - - Caryophylleæ, 3, 72.
Capsule 1-seeded - - - *Corrigiola*, 3, 326.

M. *Styles* 3; *petals* 0.

Seeds sunk in the calyx - - - Chenopodeæ, 3, 16.
Capsule 1-seeded, cut round - - Amaranthideæ, 3, 17.

N. *Styles* 4.

Capsule 4-valved; *petals* 5 - - - Parnassiæ, 3, 79.
Berry 4 or 5-nutted - - - Aquifoliaceæ, 3, 43 D.

O. *Styles* 5.

Seed 1, in the calyx - - - - Staticinæ, 3, 20.
Seeds, 4 or 5, in the calyx - - - *Sibbaldia*, 3, 355.
Capsule 1-celled; *placentarium* parietal - Droseraceæ, 3, 75.
Capsule 1-celled; *placentarium* central - Caryophylleæ, 3, 72.
Capsule 1-celled; *calyx* 3-cut - - Portulaceæ, 3, 48.
Capsule 10-celled, *cells* 1-seeded - - Lineæ, 3, 71.
Capsules 5, 1-seeded, arillated - - Geranieæ, 3, 66.

P. *Styles* many.

Ranunculeæ, 3, 85 C.

7. STAMENS *six*.

A. *Style* 1; *stamens* 4 long, 2 short.

Petals 4 - - - - - Cruciferæ, 3, 80.

B. *Style* 1; *stamens* equal; *perianthium* double.

Petals 4, irregular; *capsule* 1-celled - - Fumarideæ, 3, 81.
Petals 5; *capsule* 1-celled - - - Frankeniaceæ, 3, 74.
Petals 6; *berry* 2-seeded - - - Berberideæ, 3, 84.
Petals 6; *capsule* 1 or 2-celled - - - Salicariæ, 3, 52.

C. *Style* 1; *stamens* equal; *perianthium* simple, glumaceous.

Glumes 6 - - - - Junceæ, 3, 12.

D. *Style* 1; *stamens* equal; *perianthium* simple, calycine.

Capsule 2-celled; *calyx* 6-cut - - - Salicariæ, 3, 52.
Pericarp 1-seeded - - - Polygoneæ, 3, 15.

E. *Style* 1; *stamens* equal; *perianthium* simple, petaloid.

Capsule 3-celled, below - - - Amaryllideæ, 2, 19.
Capsule 3-celled, above; *seeds* flat - - Liliaceæ, 2, 14.
Capsule 3-celled, above; *seeds* roundish - Asphodeleæ, 2, 15.
Capsule 3-celled, above; *seeds* long - - - Junceæ, 2, 12.
Berry 3-celled, above; *seeds* black - - Asparageæ, 2, 16.
Berry 3-celled, above; *seeds* pale - - Smilaceæ, 2, 17.
Berry 3-celled, below - - - Tamaceæ, 2, 18.

F. *Style* 1; *stamens* equal, filaments united.

Fumarideæ, 3, 81.

G. *Styles* 2.

Petals 0; *seeds* 1 - - - Polygoneæ, 3, 15.
Petals 0; *seeds* 1 or 2, sunk - - Scleranthus, 3, 323.
Petals 5; *seeds* 1 or 2, sunk - - - Sanguisorba, 3, 350.

H. *Styles* 3, or more.

Pericarp 1-seeded - - - Polygoneæ, 3, 15.
Pericarp 1-celled, many-seeded - - Droseraceæ, 3, 75.
Pericarp 6-celled, many-seeded - - Aristolochiæ, 3, 11.
Pericarps 3, many-seeded - - Colchicaceæ, 2, 13.
Pericarps 3 or 6, 1 or 2-seeded - - Juncagineæ, 2, 24.
Pericarps 6, 2 or 3-seeded - - Alismaceæ, 2, 22.
Pericarps 7 to 20, 1-seeded - - - - - Alismaceæ, 2, 22.

8. STAMENS *seven*.

Style 1 - - - - - *Trientalis*, 3, 61.

9. Stamens *eight*.

A. *Style* 1; *perianthium* double.

Samare compressed; *petals* 5	Acerineæ, 3,	68.
Capsule 4-celled; *petals* 4	Onagrariæ, 3,	56.
Capsule 1-celled; *filaments* distinct	Gentianæ, 3,	27.
Capsule 2-celled; *filaments* united	Polygaleæ, 3,	77.
Capsule 4 or 5-celled; *petals* 1 or 5	Ericinæ, 3,	36.
Berry 4-celled; *petals* 1 or 4	Vaccinieæ, 3,	37.

B. *Style* 1; *perianthium* single.

	Thymeleæ, 3,	14.

C. *Styles* 2.

Perianth. double	Gentianæ, 3,	27.
Perianth. single; *capsule* 2-valved	*Chrysosplenium*, 3,	317.
Perianth. single; *pericarp* 1-seeded, above	Polygoneæ, 3,	15.
Perianth. single; *seeds* 1 or 2 sunk	Paronychideæ, 3,	49.

D. *Styles* 3.

	Polygoneæ, 3,	15.

E. *Styles* 4.

Berry 1, above; *petals* 4	Smilaceæ, 2,	17.
Berry 1, below; *petals* 1 to 4	Loranthideæ, 3,	44.
Capsule above; *petals* 4	Caryophylleæ, 3,	72.
Capsules 4, above; *petals* 4	Crassulaceæ, 3,	47.
Capsule below; *petals* 0	Haloragеæ, 3,	55.

10. Stamens *nine*.

Styles 6; *capsules* 6, above	Butomaceæ, 2,	23.
Styles 6; *capsule* 1, below	Hydrocharideæ, 2,	25.
Styles 9	Empetrideæ, 3,	7*.

11. Stamens *ten*.

A. *Style* 1.

Fruit below	Vaccinieæ, 3,	37.
Fruit above; *corolla* regular	Ericinæ, 3,	36.
Fruit above; *corolla* papilionaceous	Leguminosæ, 3,	63.

B. *Styles* 2.

Seeds 2, sunk in the calyx	Paronychideæ, 3,	49.
Seeds 1 or 2, sunk; *petals* 0	Paronychideæ, 3,	49.
Seeds 1 or 2, sunk; *petals* 5	Agrimoniaceæ, 3,	59.
Capsule 2-beaked, 1 or 2-celled	Saxifrageæ, 3,	46.
Capsule beakless, 1-celled	Caryophylleæ, 3,	72.

C. *Styles* 3 or 5; *petals* 5.

Caps. 1 to 5-celled, oblong; *stam.* on receptacle	Caryophylleæ, 3,	72.
Caps. 1 to 5-celled, angular; *stam.* on receptacle	Geranieæ C. 3,	66.
Caps. 1 to 5-celled; *stamens* on calyx	Caprifoliaceæ, 3,	43.
Caps. 5, many-seeded	Crassulaceæ, 3,	47.
Caps. 5, 1-seeded	Geranieæ A. 3,	66.

D. *Styles* 3 or 5; *petals* 4.

Corolla irregular; *capsule* 1 or 3-celled	Geranieæ B. 3,	66.

E. *Styles* 3 or 5; *petal* 1.

Berry 4 or 5-nutted	Caprifoliaceæ, 3,	43.
Pericarp 1-seeded	Polygoneæ, 3,	15.

12. STAMENS *eleven to twenty.*

Style 1; *pet.* 0; *pericarp* 1-seeded, above	Ceratophyllæ, 3, 54.
Style 1; *pet.* 0; *pericarp* 6-celled, below	Aristolochiæ, 3, 11.
Style 1; *petals* 6	Salicariæ, 3, 52.
Styles 2	Agrimoniaceæ, 3, 59.
Styles 3; *capsule* 1-celled, gaping	Resedaceæ, 3, 76.
Styles 3; *capsule* 2 or 3-celled	Euphorbiaceæ, 3, 10.
Styles 4	Dryadeæ, 3, 60.
Styles 10 or 12	Crassulaceæ, 3, 47.

13. STAMENS *twenty or more on the calyx.*

Styles 1, or more.

Drupe 1-celled, above	Drupaceæ, 3, 62.
Pericarp 2 or 5-celled, below	Pomaceæ, 3, 57.
Capsule 2-valved, above	Ulmaceæ, 3, 8.
Akenium 1-seeded, above; *calyx* flasklike	Rosaceæ, 3, 58.
Akenium 1-seeded, above; *calyx* expanded	Dryadeæ, 3, 60. Agrimoniaceæ, 3, 59.

14. STAMENS *twenty or more on the receptacle.*

A. *Style* 1.

Calyx 2-leaved	Papaveraceæ, 3, 82.
Calyx 4-leaved	Ranunculaceæ, 3, 85.
Calyx 5-leaved; *placentarium* parietal	Cistineæ, 3, 73.
Calyx 5-leaved; *placentarium* central	Tiliaceæ, 3, 69.
Petals many; *berry* many-seeded	Nymphæaceæ, 3, 83.

B. *Styles* 2 or more.

Pericarp 6-celled	Hydrocharideæ, 2, 25.
Pericarp 3 or 5-celled	Hypericineæ, 3, 67.
Caps. 2 or more, 1-celled; *petals* 4—20, *filaments* free	Ranunculaceæ, 3, 85.
Caps. 2 or more, 1-celled; *petals* 3, *filaments* free	Alismaceæ, 2, 22.
Caps. 2 or more, 1-celled; *fil.* united	Malvaceæ, 3, 70.
Berries many, 1-celled	Aroideæ, 2, 7.

15. STAMENS 1 *or more, on an ament-scale.*

Abietideæ, 3,1.
Cupressideæ, 3, 2.
Taxideæ, 3, 3.
Betulideæ, 3, 4.
Corylideæ, 3, 5.
Salicineæ, 3, 6.
Myriceæ. 3, 7.

16. FLOWERS *in a common calyx.*

Restiaceæ, 2, 11.
Compositæ, 3, 39.
Dipsaceæ, 3, 40.
Eryngium, 3, 311.
Jasione, 3, 174.

THE

NATURAL ARRANGEMENT

OF

BRITISH PLANTS.

Series II. PLANTÆ ENDOGENÆ.

PLANTS composed of cellular texture, with lymphatic, spiral, and proper vessels; and with cortical pores in the leaves or herbaceous tip of the stem. *Stems* entirely destitute of a central pith, medullary radii, or true bark; growing only at top, the vessels being disposed in bundles, the youngest in the centre: sometimes abortive, subterraneous, or root-like. *Leaves* frequently sheathed, either not notched and with simple ribs, or lobed and with branched ribs; but never truly compound. *Corculum* of the seed simple. *Cotyledons*, either solitary; or many, alternate.

Divided into two sub-series: A, cryptogamæ; B, phanerogamæ.

Subseries II. A. PLANTÆ ENDOGENÆ CRYPTOGAMÆ.

Fructifications hidden, unknown, or irregular.

FAMILIES.

Fructifications gregarious, either on the lower surface of the leaves; or rarely in spikes ... FILICES. 1.

Fr. crustaceous, sessile, axillary, at the base of the leaves, or of the bracteæ.. LYCOPODIACEÆ. 2.

Fr. radical, spherical, coriaceous, many celled; *Leaves* revolute; *Plant* aquatic .. MARSILEACEÆ. 3.

Fr. terminal, amentaceous; *Stem* leafless; *Branches* verticillate, jointed .... EQUISETACEÆ. 4.

Fr. axillary, turbinate, spiral, many seeded; *Plant* aquatic ..... CHARADEÆ. 5.

Fam. I. 1. FILICES. Ferns.

Fructifications gregarious, in sori covered when young with an involucrum; generally seated upon the lower surface of the leaves, but in some upon a spike. *Capsules* unilocular, often girt with an elastic ring, which flies back when the seeds are ripe; *seeds* very minute.—*Rhizoma* perennial, creeping; *Fronds* alternate, apparently radical, when young generally convolute; *Plants* usually herbaceous, but in some mountainous situations they become evergreen shrubs. *Winch.* Ann. of Phil. 1818.

Rhizoma very bitter, emmenagogue, purgative, and anthelmintic. *Leaves* bechic, demulcent, astringent, agreeably aromatic. *Ashes* contain much alkali; which being dissolved in a decoction of the same plant stimulate the growth of hair, and hence they have been called *capillary plants.*

1. *Capsule striated, without an elastic ring, pedicelled. Osmundaceæ*, a.

Caps. globular, seated round the frond contracted into the form of a panicle ..... OSMUNDA. 1.

2. *Caps. striated, with an elastic ring.*

a. Involucrum none. Polypodiaceæ b.

Sori transverse, linear ..... CETERACH. 2.
Sori round ..... POLYPODIUM. 3.

b. Invol. umbilicate, or attached by one side; sori round. Aspidiaceæ, c.

Invol. umbilicate, or kidney shape, fixed in the centre ..... ASPIDIUM. 4.
Invol. sharp-pointed, open from top to bottom ..... CYCLOPTERIS. 5.
Invol. attached to one side, open towards the margin ..... ATHYRIUM. 6.

c. Invol. fixed on one side, opening to the midrib; sori linear. Asplenieæceæ, d.

Sori separate; originating laterally from a rib .... ASPLENIUM. 7.

d. Invol. double, opening by a longitudinal fissure; sori linear. Scolopendriæ, e.

Sori oblique, parallel to each other between the veins of the frond ..... SCOLOPENDRIUM. 8.

e. Involucre opening towards the rib; sori linear, parallel to the midrib. Blechnideæ, f.

Involucre scariose, submarginal ..... BLECHNUM. 9.
Involucre scariose, marginal ..... STEGANIA. 10.

f. Involucre marginal, scariose, originating from the inflected upper membrane of the frond, opening inwards. Pterideæ. g.

Sori linear, marginal, contiguous ..... PTERIS. 11.
Sori dot-like ..... ADIANTUM. 12.

g. Involucre more or less cupshape, superficial, containing the sori. Cyatheæ, h.

Sori dorsal; *involucre* peltate, *margin* fringed; *receptacle* none ..... WOODSIA. 13.
Sori marginal; *involucre* pitcher-shape, one-leafed; *receptacle* cylindrical ..... TRICHOMANES. 14.
Sori marginal; *involucre* pitcher-shape, two-leaved; *receptacle* cylindrical ..... HYMENOPHYLLUM. 15.

3. *Capsule without an elastic ring, or striæ.*

Sori in a compound spike, opening parallelly to their insertion. *Bostrichiæ*, i... BOSTRICHIUM. 16.
Sori in a subarticulate distichous spike, opening transversely. *Ophioglossæ*, k. OPHIOGLOSSUM. 17.

A. OSMUNDACEÆ. *Capsules* very numerous, pedicelled, elegantly striated, generally radiated at top; when magnified finely veined, and pellucid.

Gen. I. 1. OSMUNDA. Lobel and Pena. *Flowerfern.*

Capsule footstalked, globular, semi-bivalve, opening at the striæ, situated either on the back of the unaltered frond, or surrounding the frond contracted into the form of a panicle.—*Root* fleshy; *Frond* many tufted, pinnate, smooth.

Osmunda regalis. *Royal Flowerfern.*

Frond bipinnate; *Leaflets* lanceolate, edge scarcely notched, lower ones opposite, sub-auricled at the base; *Panicle* bipinnate, fructiferous, at the apex of the frond.

Filix fœm. q. F. ramosa non dentata florida C. Bauhin, *Raii Syn.* 125, 4. F. florida seu Osmunda regalis, *Ger. em.* 1131; *Park.* 1038. Osmunda regalis, *Lin. S. P.* 1521.
Water fern. Osmund royal. Royal moonwort. Flowering fern.

Watery places in woods; perennial; June and July.

β. *incisa. Lower leaflets*, 2 or 3 cut.

B. Polypodiaceæ. *Capsules* nearly surrounded with an elastic ring which bends back when the capsule bursts; *Involucrum* none, except the hairs which surround the capsules.

II. 2. CETERACH. Er. Cordus. *Miltwaste.*

Sori transverse, linear.—*Root* fibrous; *frond* cespitose, pinnatifid; lower surface covered with lanceolate, acute, serrulate, reticulate, brown, shining, membranous scales, which enclose the capsules.

Ceterach officinarum. *Shop miltwaste.*

Frond pinnatifid; *lobes* confluent, obtuse, not notched, beneath paleo-squamose; *scales* not notched.

Ceterach officinarum, *C. Bauhin, Pin.* 354.
Asplenium sive Ceterach, *Raii Syn.* 118; *Ger. em.* 1139. *Park.* 1046.
A. Ceterach, *Lin. S. P.* 1538.
A. sinuosum, *Salisb, Pr.* 403.
Scolopendrium Ceterach, *Sym. Syn.* 193.
Blechnum squamosum, *Stokes Bot. Mat. Med.* 617.
Gramnites Ceterach, *Swartz Syn. Fil.* 23.
Spleenwort.

Calcareous rocks and old walls; perennial; nearly all the year.

Root black; *Frond* cespitose, 4—8 in. high, spreading, lanceolate, *lobes* alternate, rarely opposite; smooth above; *Capsules* auburn.

III. 3. POLYPODIUM. Theophrastus. *Polypody.*

Sori round, in rows more or less distant from each other.—*Root* creeping, torulose, scaly, fibres villose; *frond* pinnately divided, sometimes naked, or furnished with simple hairs, and long, lanceolate, reticulate, membranaceous scales.

1. *Polypodium vulgare.* *Common polypody.*

Frond deeply pinnatifid; *lobes* linear-lanceolate, crenulate, approximate; *sori* solitary; *rhizoma* chaffy.

Polypodium, *Raii Syn.* 117, 1; *Ger. em.* 1132.
Pol. vulgare, Park. 1039; *Lin. S. P.* 1544.
Polypody of the oak. Wallfern. Polypody.

Trunks of old trees, walls; perennial; May to October.

Frond 4—8 in. high, erect, lanceolate, acute; *sori* in two rows parallel to the ribs.

Root sweetish, but grows bitter by long boiling; gently purgative when fresh. ʒvj infused in ʒss of boiling water is sufficient for two doses.

β. *serratum.* *Leaves* doubly serrate.

Polypodium murale, pinnulis serratis Petiveri, *Raii Syn.* 117, 2.

γ. *sinuatum.* *Lobes* sinuate.

Polypodium vulgare lobis proliferis, *Bolt. Fil.* 33.

δ. *Cambricum.* *Lobes* pinnatifido-dentated.

Polypodium Cambro-britannicum, &c. Plukeneti, *Raii Syn.* 117, 3.
P. Cambricum, *Linn. S. P.* 1546.
P. vulgare γ, *Huds. Fl. Angl.* 455.

ε. *acutum.* *Leaves* very long, distantly serrated; *serratures* tapering to an acute point.

2. *Polypodium latebrosum.* *Shady polypody.*

Frond. bipinnatifid, two lower leaflets bent back; *lobes* linear, lanceolate, obtuse, not notched, ciliated; lower ones adnato-decurrent at the base by a four-cornered appendage; *veins* hairy: *sori* solitary, marginal.

Filix mas q. F. minor Britannica, &c. Bob. H. Ox. *Raii Syn.* 122, 8.
Pol. Phegopteris, *Lin. S. P.* 1550.
Pol. latebrosum, *Sal. Prod.* 403.
Wood Polypody.

Fissures of rocks; perennial; June and July.

Frond erect, 1—2 feet high, pale green; *stem* very long, hairy, and scaly; *pinnæ* opposite, connate, soft, hairy, lower ones reflexed; *margin* subcrenate; *sori* distinct, near the margin of the lobes.

3. *Polypium pulchellum.* *Handsome polypody.*

Frond ternate, bipinnate, spreading, deflected; *lobes* obtuse, scarcely notched; *sori* marginal; *root* filiform.

Filix fœmina q. F. ramosa minor J. Bauh. *Raii Syn.* 125, 6.
Polypodium Dryopteris, *Lin. S. P.* 1555.
Pol. pulchellum, *Sal. Prod.* 403.

Shady sides of rocks; perennial; July.

Stipes very slender, erect, a foot high, smooth; *frond* ternate, spreading, rather bent down, very tender, light green, 3 in. wide, bipinnate, the odd one rather larger; *leaflets* sessile, the lower ones larger and more compounded; *lobes* oblong, crenato-dentate; *rachis* nearly capillary, rather downy; *sori* numerous, small, not in the least hairy, never running into one another.

4. *Polypodium calcareum.* *Lime polypody.*

Frond ternate, bipinnate, straight, rather ridged; *lobes* rather obtuse, scarcely notched; *sori* marginal, confluent.

P. Dryopteris, *Dickson, Dried Pl.* 16; *Bolt. Fil.* 53.
Dryopteris Tragi, *Ger. em.* 1135.
Filix pumila saxatilis prima Clusii, *Park.* 1043.
Pol. calcareum, *Smith, Fl. Br.* 1117.
Treefern. Rigid 3-branched polypody.

Mountainous heaths in chalky soils; peren. July.

Root shorter and thicker than P. pulchellum; *frond* stiffer and more scaly at the base; leaves half the size, rather upright.

C. ASPIDIACEÆ. *Sori* round; *involucrum* umbilicated or reniform, and either attached by the centre and open all round, or attached by one side and open on the other side.

IV. 4. ASPIDIUM. Swartz, Schrad. Journ. *Shieldfern.*

Sori round; *involucra* kidneyshape, umbilicate, fixed in the centre, open all round.

1. *Aspidium asperum.* *Rough shieldfern.*

Frond pinnate; *stipes* scaly; *pinnæ* lanceolate, falcate, acute, ciliate, serrate, the base eared above, cut out below, upper ones only fruitbearing, under surface chaffy; *sori* solitary.

Lonchitis aspera major, *Raii Syn.* 118, 2; *Ger. em.* 1140.
Polypodium Lonchitis, *Linn. S. P.* 1548.
Polystichum Lonchitis, *Roth Germ.* 3, 71.
Royal polypody. Great spleenwort. Spleenwort polypody.

Cleft of rocks; perennial; May, June.

Frond 4—6 in. high, erect, narrow.

2. *Aspidium odoriferum.* *Scented shieldfern.*

Frond pinnate; *pinnæ* lanceolate, smooth, beneath resino-glandular, pinnatifid; *lobes* lanceolate, obtuse, not notched, the lower ones rather longer; *sori* marginal, running together.

Filix mas ericeti Dunsmore Petiveri, *Raii Syn.* 122.
Polypodium Thelypteris, *Huds.* 457.
P. Oreopteris, *Ehrh. Cryp.*
P. montanum, *Willd. Prod.* 883.
Polystichum montanum, *Roth Germ.* 3, 74.
Aspidium Oreopteris, *Swartz Syn. Fil.* 50.
Heath polypody.

Mountainous heaths and dry woods; peren. July.

Root large, fibrous, scaly; *frond* 3–4 feet high, lanceolate; *pinnæ* beneath smooth, covered with numerous golden resinous spots; *sori* numerous; *involucra* extremely thin, umbilicate, torn, withering quickly.

β. minor. Smaller in all its parts.

Filix mas q. F. pumila saxatilis altera Clusii, *Raii Syn.* 122, 9; *Park* 1043.
Male stonefern.

3. *Aspidium nemorale.* *Grove shieldfern.*

Frond bipinnate; *leaflets* oblong, obtuse, very finely serrate; *sori* near the midrib; *stipes* and *midrib* chaffy.

Filix mas vulgaris, *Raii Syn.* 120, 1; *Park.* 1036.
F. mas non ramosa, pinnulis latis densis minutim dentatis, *Ger. em.* 1129.
Polypodium Filix mas, *Lin. S. P.* 1551.
Aspidium Filix mas, *Swartz Syn. Fil.* 55.
Asp. nemorale, *Sal. Prod.* 403.
Polystichum Filix mas, *Roth Germ.* 3, 82.
Male fern. Male polypody.

Woods, heaths, stony places; peren. June, July.

Roots cæspitose, large, scaly; *frond* lanceolate, 3 feet high; *pinnæ* numerous, upper leaflets joined together; *sori* near the ribs especially at the base of the leaflets in a single row, large, prominent, numerous; *involucra* umbilicate, split on one side, the edge folded.

Root expells the tape-worm, ʒj—ʒij given in powder, in the morning fasting, a gentle purge having been given over night: some give a drastic purge the same morning, others only repeat the medicine daily until the worms are expelled. *Frond* burned for its alkaline ashes.

β. cristatum. Engl. Bot. 1949.

4. *Aspidium aculeatum.* *Prickly shieldfern.*

Frond bipinnate; *leaflets* ovate, subfalcate, acute, mucronato-serrate; towards the base the upper ones are truncated, the lower ones short and wedgelike; *sori* scattered; *stipes* and *ribs* very chaffy.

Filix mas non ramosa, pinnulis latis auriculatis spinosis. *Raii. Syn.* 121, 2; *Ger. em.* 1130.
Polypodium aculeatum, *Linn. S. P.* 1552.
Polystichum aculeatum, *Roth Germ.* 3, 79.
Aspidium aculeatum, *Swartz Schr. Jour.* 2, 37.
Prickly polypody.

Woods, shady places; peren. June.

Frond 2 feet high, elegant, dark green. This common variety transplanted into a garden became similar to γ.

β. muscosum. Leaflets extremely chaffy.

Filix mas aculeata alis expansis, muscosa lanugine aspersa Plukeneti, *Raii Syn.* 121, 5.

γ. *Cambricum. Leaflets* rounder, prickles longer than usual.

F. mas q. F. lonchitidi affinis Doody, *Raii Syn.* 121, 4.

5. *Aspidium lobatum.* *Lobed shieldfern.*

Frond bipinnate; *leaflets* obtuse, ovate, mucronated serrate, those next the mainrib much larger, eared, the tips bristled; *stipes* and *mainrib* chaffy.

Filix mas q. F. aculeata major, &c. *Raii Syn.* 121, 3.
F. aculeata, lonchitidis æmula Pluk. *Raii Syn.* 121, 4.
Polypodium lobatum, *Hud. Fl. An.* 459.
Aspidium lobatum, *Swartz Schr. Jour.* 2, 37.
Closeleaved shieldfern.

Shady lanes; peren. June.

Very like the preceding, but paler and more shining; *frond* narrower, curled, and apparently convex; *leaflets* more elliptic, less cut, 15 or 16 pair in each pinna, and those next the mainrib so large as to extend over the leaflets of the next pinna; *pinnæ* 35 or more pairs in each leaf.

β. *ramosum.* End of the frond divided into 2 or 3 curled segments.

6. *Aspidium dilatatum.* *Dilated shieldfern.*

Frond bipinnate; *leaflets* oblong, distinct, pinnatifid; *lobes* mucronato-serrate; *stipes* chaffy; *involucra* smooth.

Filix fœmina q. F. mas ramosa, pinnulis dentatis, *Ger. em.* 1129; *Raii Syn.* 124, 2.
Polypodium cristatum, *Huds. Fl. Ang.* 457.
P. dilatatum, *Hoffm. Germ.* 2. 7.
Polystichum multiflorum, *Roth Germ.* 3, 87.
Crested polypody.

Moist shady places; peren. June, July.

Root tuberous, scarcely creeping; *frond* 2 feet high, light green; *sori* numerous, very distinct.

β. *Major.* Triply pinnate, 3 or 4 feet high.

γ. *Minor.* Only the first pair of pinnæ triply divided.
Polypodium rhæticum, *Hudson Fl. Ang.* 458?

7. *Aspidium cristatum.* *Crested shieldfern.*

Frond pinnate; *pinnæ* subcordate, ovate, oblong, pinnatifid; *leaflets* oblong, obtuse, dentato-serrate; *stipes* chaffy.

Polypodium cristatum, *Lin. S. P.* 1551.
P. Callipteris, *Hoffm. Germ.* 252;
Aspidium cristatum, *Swartz Syn. Fil.* 52.
Polystichum cristatum, *Roth Germ.* 3.84.

Boggy heaths; peren. June. July.

Root cæspitose; *frond* 1–2 feet high; *sori* black; *involucra* snow white.

8. *Aspidium fragrans.* *Fragrant shieldfern.*

Frond pinnate; *pinnæ* lanceolate, close together, deeply cut; *lobes* oblong, obtuse, dentate; *sori* contiguous; *stipes* and *mainrib* very chaffy.

Polypodium fragrans, *Huds. Fl. Ang.* 457.
Aspidium fragrans, *Swartz Syn. Fil.* 51.
Sweet polypody.

Moist chinks in rocks; perennial; July to September.

9. *Aspidium spinulosum.* *Thorny shieldfern.*

Frond bipinnate; *leaflets* oblong, decurrent, confluent, inciso-dentate; *lobes* mucronato-serrate; *stipes* chaffy; *involucra* glandular.

Filix pumila saxatilis altera, *Pluk. Alm.* 151.
Polypodium spinulosum, *Retz. Prodr.* 250.
Polystichum spinulosum, *Roth Germ.* 3, 91.
Aspidium spinulosum, *Swartz Syn. Fil.* 51.

Bogs; Perennial; June, July.

Frond 1 foot high, long stemmed, subovate, light green, smooth, thin, nearly transparent; *sori* small, distant, placed towards the axillæ of the leaflets; *involucra* circinate, split on one side.

10. *Aspidium palustre.* *Marsh shieldfern.*

Frond pinnate; *pinnæ* linear-lanceolate, pinnatifid, smooth; *lobes* ovate, acute, not notched; *sori* marginal, at first contiguous; afterwards confluent.

Filix mas q. F. minor palustris repens, *Raii Syn.* 122, 7.
Dryopteris, *Ger. em.* 1135.
Dryopteris seu Filix querna repens, *Park.* 1041.
Acrostichum Thelypteris, *Lin. S. P.* 1528.
Polypodium Thelypteris, *Lin. Mant.* 505.
Polystichum Thelypteris, *Roth Germ.* 3, 77.
Aspidium Thelypteris, *Swartz Syn. Fil.* 50.
Aspidium palustre, *Sal. Prod.* 420.
Creeping water fern.

Marshes; perennial; July.

Frond upright 1--2 feet high, lanceolate, pleasant green; *stipes* smooth; *lobes* subcrenate at the tip, the lower ones crossing in pairs; *sori* numerous, and when ripe covering the whole surface; *mainrib* very smooth; *partial ribs* rather hairy.

V. 5. CYCLOPTERIS. Schrader. *Cupfern.*

Sori in round scattered spots; *involucra* sharppointed, opening completely from tip to base, becoming reflexed.

Cyclopteris fragilis. *Brittle cupfern.*

Frond bipinnate; *leaflets* oblong obluse, inciso-serrate; *serratures* obtuse, denticulate; *mainrib* winged.

Filix fœmina q. F. saxatilis caule tenui fragili, *Raii Syn.* 125, 7.
Polypodium fragile, *Lin. S. P.* 1553.
Aspidium fragile, *Swartz. Syn. Fil* 58.
Cyathea fragilis, *Smith Fl. Br.* 1139.
Cyclopteris fragilis, *Schrad. Journ.*

Rocks, old walls; perennial; June, July.

β *Rhætica.* *Pinnæ* spear shape, acute, distant; *leaflets* deeply lobed; *lobes* regularly serrate.

Filix fœmina q. F. montana ramosa minor, argute denticulata Lhwyd. *Raii. Syn.* 124, 3;
Polypodium Rhæticum. *With.* 958.

γ. *acuta.* *Pinnæ* spearshape, acute; *leaflets* crowded.

δ. *obtusa.* *Pinnæ* spearshape, blunt.

VI. 6. ATHYRIUM, Roth Fl. Germ. *Femalefern.*

Sori round, dispersed; *involucra* attached by one side, mostly the inner one, open towards the margin.

1. *Athyrium irriguum.* *Meadow Femalefern.*

Frond pinnate; *leaflets* deeply pinnatifid-cut; *lobes* ovate, oblong, sharply cut and toothed; *stipes* quadrangular; *involucra* short jagged.

Polypodium irriguum, *Engl. Bot.* 2199.
Aspidium irriguum, *Smith Comp. Fl. Ang.* 156.

Shady meadows; perennial; June.

Stipes delicate, transparent green; *leaflets* nearly connected at the base by a sort of wing from the partial rib; *sori* several, about the lower part of the rachis; *involucra*, oblong or square, whitish, fringed at the edge.

2. *Athyrium fontanum.* *Spring femalefern.*

Frond pinnate; *pinnæ* cordate, pinnatifid; *lobes* ovate, rather acute, the lowest and the terminal ones subbilobate; *sori* when ripe confluent.

Filix saxatilis non ramosa, minima, *Pluken. Phytog.*
Polypodium fontanum, *Lin. S. P.* 1550.
Aspidium fontanum, *Smith Comp. Fl. Ang.* 156.

On old walls and rocks; perennial; June.

Sori confluent; *involucra* white, lateral.

3. *Athyrium lætum.* *Pleasant femalefern.*

Frond bipinnate; *leaflets* oblong, lanceolate, inciso-serrate; *serratures* 2 or 3 toothed, acute; *sori* oblong straight.

Filix mas non ramosa, pinnulis angustis raris profunde dentatis, *Raii Syn.* 121, 6; *Ger. em.* 1130.
Polypodium Filix fœmina, *Lin. S. P.* 1551.
Aspidium Filix fœmina, *Swartz Syn. Fil.* 54.
Athyrium Filix fœmina, *Roth Germ.* 3, 65.
Female polypody. Female shieldfern.

Shady marshes; perennial; June, July.

Root large, cæspitose; *frond* deep green; *involucra* kidneyshaped, margin lacerated.

4. *Athyrium regium.* *Royal femalefern.*

Frond bipinnate; *leaflets* ovate, oblong, lobato-pinnatifid; *lobes* linear, oblong, obtuse, not notched; *rachis* winged.

Filix fœmina q. Adiantum nigrum, pinnulis cicutariæ divisura Bobarti, *Raii Syn.* 126.
Polypodium regium, *Linn. Sp. Pl.* 1553.
Cyathea regia, *Sm. Fl. Brit.* 1140.
Cyathea incisa, *Engl. Bot.* 163.
Aspidium regium, *Swartz Syn. Fil.* 58.
Polypodium trifidum, *With.* 957.

Walls, and alpine rocks; perennial; June.

Root scaly; *frond* nine inches long, smooth, light green; *lobes* variously cut; *edge* not in the least notched; *ribs* rather straight.

5. *Athyrium dentatum.* *Toothed femalefern.*

Frond pinnate; *leaflets* ovato-oblong, pinnatifid; *lobes* oblong, obtuse, denticulate.

Polypodium dentatum, *Dickson Crypt.*
Cyathea dentata, *Smith Fl. Br.* 1141.
Aspidium dentatum, *Swartz Syn. Fil.* 59.

Alpine rocks; perennial; July.

Root scaly; *frond* about 9 in. long, lanceolate, acute, smooth; *ribs* of the lobes flexuose; *rachis* sometimes winged near the tip; *involucra* halved, with the margin fimbriated.

D. Aspleniaceæ. *Sori* linear; *involucra* fixed on one side, and open towards the rib.

VII. 7. ASPLENIUM. Dioscorides. *Spleenwort.*

Sori linear, separated, originating laterally from a rib, and opening towards it.

1. *Asplenium lanceolatum.* *Spearshape spleenwort.*

Frond bipinnate; *leaflets* obovate, obtuse, wedgeshape at the base, finely toothed at the tip; *sori* when ripe confluent; *margin* of the involucrum torn.

Filix fœmina q. F. elegans, adianto nigro accedens, segmentis rotundioribus, *Raii Syn.* 127, 11.
Dryopteris candida, *Ger. em.* 1135. as to the figure only.
Asplenium lanceolatum, *Huds. Fl. Ang.* 454.

Rocks and old walls; perennial; June to October.

Root black, scaly; *frond* erect 4–5 in. high, light green,

smooth; *pinnæ* opposite; *stipes* short, smooth; *sori* 3–5 short, becoming confluent: *involucra* whitish; edge torn.

2. *Asplenium lucidum.* *Shining spleenwort.*

Frond bipinnate; *pinnæ* oblong-lanceolate, acute; *leaflets* oblong, pinnatifid; *lobes* toothed at the tip; *sori* become confluent; *margin* of the involucra not notched.

Filix fœmina q. Adiantum nigrum officinarum J. Bauhini, *Raii Syn.* 126, 10.
Onopteris mas, *Ger. em.* 1137.
Adiantum nigrum vulgare, *Park.* 1049.
Asplenium Adiantum nigrum, *Lin. S. P.* 1541,
Asplenium lucidum, *Sal. Prod.* 413.
Black maidenhair. Oakfern.

Roots of trees, old walls, and shady banks; perennial; June—October.

Root black; *frond* erect, a foot high, sharp pointed, very dark green, smooth; *stipes* long, dark purple, shining; *sori* many; *involucra* very thin, margin not in the least notched.

Demulcent, bechic, diuretic, nephritic; and praised by Hoffmann as an antiscorbutic.

β. *sterile.* *Leaflets* barren, membranaceous, elegantly palmato-laciniate.

Filix fœmina q. F. minor longifolia, tarsis raris, pinnulis longis, tenuissimis et oblongis laciniis fimbriatis Sherard, *Raii Syn.* 127, 13.

In caves, where the sun's rays cannot enter.

3. *Asplenium marinum.* *Marine spleenwort.*

Frond pinnate; *leaflets* oblong, obtuse, inciso-serrate; the base rounded and subarticulate above, truncated below.

Filix Alpina q. Chamæfilix marina Anglica J. Bauhin, *Raii Syn.* 119. 2.
F. marina Anglica, *Park.* 1045.
Filicula petræa fœmina, seu Chamæfilix marina Anglica, *Ger. em.* 1143.
Asplenium marinum, *Lin. S. P.* 1540.

Rocks on the sea coasts: perennial; June, October.

Roots black, scaly; *frond* of various sizes; *stipes* black, smooth; *leaflets* alternate, dark green, veiny; *rachis* winged; *sori* opposite; *involucra* brown, not in the least notched.

Opening, emmenagogue; the mucilaginous extract useful in severe burns and scalds.

β. *trapeziforme.* *Leaflets* lobed or jagged.

Capillus Veneris q. Adiantum majus coriandri folio, adianto vero affine, pediculo pallide rubente Sibbaldi, *Raii Syn.* 124, 2.
Adiantum trapeziforme, *Huds. Fl. Ang.* 460.

4. *Asplenium Germanicum.* *German spleenwort.*

Frond pinnate; *leaflets* alternate, lanceolate, cuneate, toothed at the tip, the lower ones two-parted.

Scolopendrium alternifolium, *Roth Germ.* 3, 53.
Asplenium alternifolium, *With.* 768.
Asplenium Breynii, *Swartz Syn. Fil.* 85.
Asplenium Germanicum, *Weis Crypt.* 299.
Alternate-leaved spleenwort.

Subalpine rocks; perennial; June to October.

Root black; *fronds* numerous, 6 in. high, erect, light green, smooth; *leaflets* alternate; *sori* few, short, pale.

5. *Asplenium saxatile.* *Rock spleenwort.*

Frond pinnate; *leaflets* subrotundo-oblong, obtuse, crenate, truncato-cuneate; *stipes* blackish brown, shining, keeled below.

Trichomanes, *Raii Syn.* 119, 1; *Park*, 1051.
T. mas, *Ger. em.* 1146.
Asplenium Trichomanes, *Lin. S. P.* 1540.
Asplenium saxatile, *Sal. Prod.* 403.
English black maidenhair.

Shaded rocks and old walls; perennial; all the year.

Root black, hairy, cespitose; *fronds* numerous, 6 in. high; *rachis* dark purple, smooth, shining; *leaflets* smooth, without veins, very dark green above, paler below; *involucra* whitish; *capsules* brown.

β. *incisum.* *Leaflets* pinnatifid; sometimes very long.

Trichomanes foliis elegantis incisis, *Raii Syn.* 120, 2.

γ. *ramosissimum.* *Frond* very much branched at top.

6. *Asplenium viride.* *Green spleenwort.*

Frond pinnate; *leaflets* subrotundo-ovate, wedgeshape at the base, obtusely serrate; *rachis* green, flat beneath.

Trichomanes costa viridi, quandoque bifida, foliis lenticularibus crenatis, *Lhwyd in Raii Syn.* 119, 2.
Asplenium viride, *Hud. Fl. Ang.* 453.

Moist alpine rocks; perennial; June, July.

Frond about 6 in. high, linear-lanceolate, paler than A. saxatile; *rachis* rather four-sided, or flattened below; *involucra* and *capsules* yellowish.

β. *ramosum.* *Rachis* divided.

Trichomanes ramosum, *Raii Syn.* 119, 2.
Trichomanes fœmina, *Ger.* 985.
Branched English black maidenhair.

7. *Asplenium murale.* *Wall spleenwort.*

Frond two parted at the base, simply pinnate at the tip; *leaflets* rhomboidal, oblong, obtuse, with the tip gnawed or crenate.

Ruta muraria, *Raii Syn.* 122; *Ger. em.* 1144.
Ruta muraria, seu Salvia vitæ, *Park.* 1050.
Asplenium Ruta muraria, *Lin. S. P.* 1541.
Asplenium murale, *Stokes Bot. M. M.* 4, 610.
Scolopendrium Ruta muraria, *Roth Germ.* 3. 52.
White maidenhair. Wall rue. Tentwort.

Moist clefts in rocks and stone walls; per. June to Oct.

Root dark brown; *fronds* many, 9 in. high, spreading, very dark green, rather of a bluish cast, smooth; *leaflets* footstalked, wedgeshape or rhombic. horizontal or even bent down; *sori* many; *involucra* whitish, their edge crenulate.

Demulcent and diuretic.

β. *majus.* *Leaflets* narrow, acuminate.

Ruta muraria q. Adiantum album tenuifolium, rutæ murariæ accedens, J. Bauh. *Raii Syn.* 123, 2.

8. *Asplenium septentrionale.* *Northern spleenwort.*

Frond usually 2 or 3 parted; *lobes* linear, with the tip mostly 3-toothed; *stipes* very long.

Filix saxatilis Tragi, *Raii Syn.* 120, 1; *Park.* 1045.
Muscus corniculatus, *Ger. em.* 1561.
Acrostichum septentrionale, *Lin. S. P.* 1524.
Asplenium septentrionale, *Hull Fl. Ang.* 241.
Scolopendrium septentrionale, *Roth Germ.* 3, 49.
Forked maidenhair.

Clefts of rocks in the north parts; peren. June to Oct.

Root black, cæspitose; *fronds* many, 6 in. high, upright, dark green, smooth, narrow at the base, above three parted; *sori* parallel, brown, covering all the narrow disk; *involucra* not in the least notched.

E. Scolopendriæ. *Involucra* double, opening lengthways by a slit; *sori* linear.

VIII. 8. SCOLOPENDRIUM. Theophrastus. *Hartstongue.*

Sori linear, oblique, parallel to each other, placed between the secondary ribs of the frond; *involucra* double, opening by a longitudinal fissure.

Scolopendrium vulgare. *Common hartstongue.*

Frond broad, lanceolate, heartshape at the base; *stipes* chaffy.

Phyllitis, *Raii Syn.* 116, 1; *Ger. em.* 1138.
Phyllitis, seu Lingua cervina vulgaris, *Park.* 1046.
Asplenium Scolopendrium, *Lin. S. P.* 1537.
Asplenium elongatum, *Salisb. Prod.* 402.
Scolopendrium Phyllitis, *Roth Germ.* 3, 47.
Scolopendrium vulgare, *Symons Syn.*
Blechnum linguifolium, *Stokes Bot. M. M.* 4, 616.

Moist rocks, walls, wells, and banks; perennial; July.

Root fibrous, brown; *frond* 12 to 18 in. high, upright, light green on both sides, smooth; *stipes* brown, often rather scaly; *sori* numerous, yellowish brown, distinct; *involucra* turn back and are hidden by the prominent capsules.

β. *crispum.* *Frond* crisp, jagged at the edge.

Phyllitis crispa, *J. Bauh. H. P.* 3, 749.

γ. *multifidum.* *Frond* wavy, tip manycut, crisp.

Phyllitis multifida, *Ger. em.* 1138; *Raii Syn.* 117, 1.

δ. *polyschides.* *Frond* cleft at the edges.

Phyllitis polyschides laciniis singulis cruciatum decussatis Bobartii, *Raii Syn.* 117, 2.

ε. *ramosum.* *Stipes* branched; *frond* divided.

F. Blechnideæ. *Sori* linear, contiguous, parallel, on each side of the midrib; *involucra* opens towards the rib.

IX. 9. BLECHNUM. Dioscorides. *Spicant.*

Sori linear, longitudinal, contiguous, parallel to the midrib; *involucra* superficial, submarginal, opening on the inside.

Blechnum boreale. *Northern spicant.*

Frond simple, pinnatifid; *lobes* lanceolate, rather obtuse, parallel; *fruitbearing fronds* distinct, and narrower than the barren ones; *leaflets* linear pointed.

Lonchitis aspera, *Raii Syn.* 118; *Ger. em.* 1140.
Lonchitis aspera minor, *Park.* 1042.
Osmunda Spicant, *Lin. S. P.* 1522.
Struthiopteris Spicant, *Scop. Carn.* 1258.
Onoclea Spicant, *Hoffm. Germ.* 2, 11.
Acrostichum Spicant, *Sibthorp.* 267.
Osmunda borealis, *Salisb. Prod.* 402.
Blechnum Spicant, *Roth Germ.* 3, 44.
Blechnum boreale, *Swartz. Schr. J.* 275.
Rough spleenwort.

Moist woods and heaths; perennial; July.

Root fibrous, scaly; *fronds* a foot or 18 in. high, dark green, smooth, pectinato-pinnate; *leaflets* very numerous, subalternate, mucronate; *capsules* brown.

X. 10. STEGANIA. R. Brown. *Stonefern.*

Sori linear, contiguous; *capsules* at length covering the back of the contracted frond, or of the leaflets; *involucra* marginal, scariose, opening inwards.

Stegania onocleoides. *Onoclea stonefern.*

Barren fronds bipinnate; *leaflets* pinnatifid; *lobes* obovate, cuneate, inciso-dentate at the tip: *fertile fronds* bipinnate, lower ones tripinnate; *leaflets* linear oblong, rather obtuse, not in the least notched, narrower at the base.

Filix fœmina q. Adiantum album crispum Alpinum Schwenckf. *Raii Syn.* 126, 9;
Osmunda crispa, *Lin. S. P.* 1512.
Pteris crispa, *With. Bot. Ar.* 764.
Onoclea crispa, *Hoff. Germ.* 2, 11.
Stegania onocleoides, *Yule Ed. Enc. Fil.*
Osmunda rupestris, *Salisb. Prod.* 402.
Parsley fern. Stone brakes.

Stone walls and rocks; perennial; July.

Root fibrous; *frond* a foot high, long stalked, smooth, pale green; *leaflets* petiolate, *barren leaflets* wedgeshape, ribbed, flat, cut at the tip; *fruitful leaflets*, on a distinct frond, elliptic, convex, not notched; *involucra* broad, turgid, crenate.

β. crispa. Leaves curled.

G. Pterideæ. *Involucra* marginal, scariose, arising from the inflected upper membrane of the frond, opening inwards.

XI. 11. PTERIS. Theophrastus. *Brakes.*

Sori linear, marginal.

Pteris fœmina. *Female brakes.*

Frond three parted; *branches* bipinnate; *leaflets* linear, lanceolate, the upper ones whole, the lower pinnatifid; *lobes* oblong, obtuse.

Filix fœmina, *Raii Syn.* 124; *Ger. em.* 1128.
F. fœmina vulgaris, *Park.* 1037.
Pteris aquilina, *Lin. S. P.* 1533.
P. borealis, *Salisb. Prod.* 402.
Common brakes, Female fern.

Heaths, woods, and poor pastures; perennial; July.

Root long, fusiform; *fronds* 3 feet high, spreading, smooth; *leaflets* opposite; *lobes* alternate, sessile, lanceolate, not notched; *sori* on the margin of the lobes; *involucra* joined together, compressed, crenulate, brown.

β. minor. *Frond* very slender; *lobes* roundish, confluent, barren.

Filix fœmina q. Filicula saxatilis ramosa maritima Plukeneti, *Raii Syn.* 125, 5.

On moist walls, but when the roots extend to the ground, they throw up the common variety, *Dillen in Ray.*

XII. 12. ADIANTUM. Theophrastus. *Maidenhair.*

Sori in round, distinct spots.

Adiantum fontanum, *Spring maidenhair.*

Frond bipinnate; *leaflets* obovate, cuneate; *fertile lobes* terminating in a linear oblong sorus; *sterile lobes* serrate.

Capillus Veneris verus, *Ger. em.* 1143; *Raii Syn.* 123, 1.
Adiantum verum sive Capillus Veneris verus, *Park.* 1049.
Adiantum Capillus Veneris, *Lin. S. P.* 1558.
Adiantum fontanum, *Sal. Prod.*
A. cuneifolium, *Stokes B. M. M.* 4, 612.
True maidenhair.

Rocks and moist walls; perennial; May to September.

Root fibrous; *fronds* sometimes a foot high, upright, spreading, handsome, smooth; *stipes* and *rachis* very smooth, shining, dark purple; *lobes* largish, fanshape, streaked, narrowed at the base, outwardly lobed, cut, rounded; *involucra* kidney-shape, flattened, at first pale, but turn black.

H. Cyatheæ. *Sori* globular; *involucra* more or less cupshaped, superficial; *capsules* generally attached to an elevated receptacle within the cup.

XIII. 13. WOODSIA. Brown. Lin. Tr. 11, 173. *Hairfern.*

Sori dorsal, roundish; *involucra* membranous, cupshape, opening at the edge which is fringed with filiform processes; *capsules* pedicelled; *receptacle* none.

Woodsia alpina. *Alpine hairfern.*

Frond pinnate; *leaflets* triangular, oblong, inciso-pinnatifid; *lobes* not nicked, the lower ones produced at the base; *capsules* few.

Filix alpina, pedicularis rubræ foliis subtus villosis Lhwyd, *Raii Syn.* 118, 1.
Acrostichum alpinum *Bolt. Fil.* 76.
A. Ilvense, *Huds.* 451.
Polypodium Arvonicum, *With.* 774.

P. Ilvense, *With.* 774.
P. hyperboreum, *Swart. Syn. F.* 39.
Ceterach alpinum, *Dec. Syn. Fl. Gall.* 1435.
Woodsia hyperborea, *Brown T. L. S.* 11, 123.
Redrattleleafed stonefern.

Alpine rocks; perennial; June.

Root cespitose; *fronds* spreading, 2 to 4 in. high, lanceolate, rather obtuse, both faces hairy; *rachis* hairy; *leaflets* not very close, heartshape, pinnatifid, dilated at the base; *lobes* rounded, rather convex, with the edges turned up, scarcely crenate, not armed; *sori* roundish, hairy, numerous, growing at length quite close, brown.

XIV. 14. TRICHOMANES. Dioscorides. *Filmfern.*

Sori marginal; *capsules* sessile, inserted into a cylindrical common receptacle, contained within a one-leaf, pitchershape open *involucrum* of a similar texture with the frond; *surculi* creeping, downy; *fronds* pellucid, divided into areolæ, very seldom undivided, commonly pinnatifid; *lobes* one-ribbed; *involucra* terminal; *receptacle* mostly extended and elongated.

Trichomanes brevisetum. *Shortbristle filmfern.*

Fronds 2 or 4, pinnatifid, smooth; *leaflets* one-flowered; *lobes* linear; with the margin unnicked; *involucra* topshape, hollow, wingless; *apex* simple, not nicked; *receptacle* hardly exserted; *stipes* winged.

Filix fœmina q. F. humilis repens, foliis pellucidis et splendentibus, caule alato Richardson, *Raii Syn.* 127, 14.
Trichomanes pyxidiferum, *Huds. Fl. Ang.* 461.
Hymenophyllum alatum, *Eng. B.* 20, 1417.
H. Tunbridgense β. *Smith F. A.* 1142.
Trichomanes brevisetum, *Brown in Aiton H. K.* 5, 529.
Cup goldilocks.

Shady springs and rocks; perennial; May and June.

Frond 4 or 5 inches high, thin, transparent, dark green.

XV. 15. HYMENOPHYLLUM. Smith. *Dwarffern.*

Sori marginal, inserted into a cylindrical receptacle, included within a bivalve involucrum; *surculi* erect, tomentose; *fronds* pellucid, divided into areolæ, pinnatifid; *lobes* one-ribbed; *involucrum* terminal; *receptacle* not exserted.

Hymenophyllum Tunbridgense. *Tunbridge dwarffern.*

Frond pinnate; *leaflets* digitato-pinnatifid; *lobes* linear, serrate; *sori* superaxillary, solitary; *involucra* serrate; *rachis* winged; *stipes* round.

Capillus Veneris q. Adiantum petræum perpusillum Anglicum, foliis bifidis vel trifidis, *Raii Syn.* 123, 2.
Darea Tunbridgensis, *Petiver Mus.*
Trichomanes Tunbridgense, *Lin. S. P.* 1561.
T. pulchellum, *Salisb. Prod.* 404.
Hymenophyllum Tunbridgense, *Smith Fl. Ang.* 1141.
Tunbridge goldilocks.

Moist and shady rocks; perennial; May and June.

Fronds 2 or 3 in. high, cespitose, decumbent or erect, dark green, membranaceous, transparent; *sori* solitary, sessile or with short footstalks on the upper margin of the lobes, lenticular, compressed; *involucrum* bivalve, the edge torn or serrate; *capsules* many, brown, globose, bivalve, sitting on a short receptacle.

I. Botrychiæ. *Sori* in a compound two-rowed spike, and opening parallely with their insertion; *capsules* without ring or striæ.

XVI. 16. BOTRYCHIUM. Swartz. *Moonwort.*

Spike two rowed, compound; *sori* open parallel to their insertion; *capsules* without ring or striæ.

1. *Botrychium lunatum.* *Lunated moonwort.*

Scape above one fronded; *frond* pinnatifid; *leaflets* lunate, not in the least nicked.

Lunaria minor, *Raii Syn.* 128; *Ger. em.* 405; *Park.* 507.
Osmunda Lunaria, *Lin. S. P.* 1519.
O. lunata, *Salisb. Prod.* 401.
Botrychium Lunaria, *Swartz Syn. Fil.* 171.
Common moonwort.

In meadows and hill pastures; perennial, June.

Root fibrous; *frond* about a hand high, smooth, greenish, single; *leaflets* crescentshape; *spike* at the base of the frond, upright, tworowed; *capsules* globose, smooth, brown.

Made into an ointment with butter, and rubbed in opposite to the kidneys, it is esteemed a certain remedy for a dysentery.

2. *Botrychium rutaceum.* *Rue moonwort.*

Scape above one fronded; *frond* bipinnatifid; *lobes* notched, 2 or 3 toothed, obtuse.

Lunaria minor ramosa, Lawsoni ; *Raii Syn.* 129 ; *Ger. em.* 406.
Osmunda Lunaria *β. Lin. S. P.* 1519.
O. lanceolata, *Gmel. N. C. Petr.* 12, 516.
Botrychium rutaceum, *Swartz Syn. Fil.* 171.

Meadows and hilly pastures; perennial; June.

3. *Botrychium matricarioides.* *Feverfew moonwort.*
Scape naked, three parted near the root, subbipinnate; *leaflets* oblong, obtuse, toothed.

Lunaria minor foliis dissectis Lawson, *Raii Syn.* 129.
Osmunda Lunaria *γ. Smith F. Ang.* 1107.
O. matricariæ, *Schrank F. Bav.* 419.
Botrychium rutaceum *β. Swartz Syn. Fil.* 171.
Botrychium matricarioides, *Willd. S. P.*

Meadows and hill pastures; perennial; July.

K. Ophioglossæ. *Spike* tworowed, apparently jointed; *capsules* immersed in the spike, opening transversely, with neither rings nor striæ.

XVII. 17. OPHIOGLOSSUM. Tragus. *Adderstongue.*

Spike two rowed; *capsules* immersed, opening transversely.

Ophioglossum vulgatum. *Common adderstongue.*
Spike on the stem; *frond* ovate obtuse, finely reticulated.

Ophioglossum, *Raii Syn.* 128; *Ger. em.* 404.
O. seu Lingua serpentina, *Park.* 506.
O. vulgatum, *Lin. S. P.* 1518.
O. ovatum *Salisb. Prod.* 401.
Ophioglossum vulgatum, *C. Bauh. Pin.* 354.

In moist fields and pastures; perennial; May.
Root fibrous; *frond* simple, single, ovate with a footstalk, scarce a hand high, very smooth, greenish, not nicked, bearing the spike at the bottom; *spike* erect, acute, compressed, bearing many capsules.

β. bifidum. *Spike* bifid.
γ. duplex. *Spike* double.
δ. incisum. *Frond* slightly lobed.

Fam. II. 2. LYCOPODIACEÆ. De Candolle. *Lycopodinideæ*, Swartz.

Fructifications crustaceous, sessile in the axillæ of the leaves, or of the bracteæ; *conceptacles* of two kinds; the common sort (the male organs?) replete with fine powdery masses grouped 3 by 3, or 4 by 4 into spherical globules; the less frequent (the female organs?) including roughish spherical globules marked underneath with three prominent ribs. — *Roots* fibrous; *stem* herbaceous or woody, simple or branched, frequently rampant; *leaves* small, not nicked, numerous, either scattered, or alternate, or two rowed, frequently stipuled.

Conceptacles capsular; valvular; leaves cauline.

Concep. 2 valved, 1 celled; *seeds* cohering in globules ..... LYCOPODIUM 18.

Concep. 3 valved, 3 celled; *seeds* angular. BERNHARDIA 19.

Concep. capsular, not valvular; leaves radical.

ISOETES 20.

I. 18. LYCOPODIUM. Clusius. *Wolfsclaw.*

Conceptacles of one kind only, sessile, kidneyshape, two-valved, one-celled, in the axillæ of the leaves, or in spikes —*Stalk* branched; *leaves* scattered.

a. Plananthus. *Conceptacles sessile in the axillæ of the leaves.*

1. *Lycopodium inundatum.* *Inundation wolfsclaw.*

Stalk rather branchy, creeping; *flowering branches* single, simple, erect; apex one-rowed; *leaves* linear, spread, acute, slightly nicked, curved above.

Lycopodium q. Muscus terrestris repens, *Raii Syn.* 108, 4.
L. palustre repens, clava singulari, *Dill. M.* 452.
Lycopodium inundatum, *Lin. S. P.* 1565.
Creeping clubmoss.

Inundated heaths, turf bogs; perennial; June, July.

Flowering branches 1 or 2 inches long; *floral leaves* larger than the common, much dilated at the base, and often one-toothed; *conceptacles* small.

2. *Lycopodium abietiforme.* *Fir wolfsclaw.*

Stalk forked, erect; *branches* eventopped; *leaves* spread, in eight series, linear, lanceolate, pointed, not in the least nicked, imbricated, ridged.

Selago foliis et facie abietis, *Raii Syn.* 106.
S. vulgaris, *Dill. Musc.* 435.
Lycopodium Selago, *Lin. S. P.* 1565.
Upright firmoss.

Wet heaths in mountains; perennial; June to August.

Stalk about 8 in. high, very leafy; *leaves* thick, dark green, shining; *conceptacles* small, brownish yellow.

Violently emetic; the decoction externally used destroys lice in children's hair.

b. Lepidotis. *Conceptacles in spikes, with bracteæ.*

3. *Lycopodium annotinum.* *Yearly wolfsclaw.*

Stalk creeping; *branches* ascending, twice twoparted at the base; *leaves* in five rows, linear, lanceolate, contracted at each year's growth; *spike* solitary, sessile, terminal.

Lycopodium elatius juniperinum, clavis singularibus, sine pediculis, *Raii Syn.* 107, 2; *Dill. M.* 455.
Lycopodium annotinum, *Lin. S. P.* 1566.

Alpine rocks; perennial; June to August.

Stem very long; *flowerbearing shoots* 2 in. high, generally branched, leafy, contracted at the last year's shoot; *leaves* expanded, light green; *bracteæ* smaller, closely tiled, rather membranaceous.

4. *Lycopodium clavatum.* *Clubbed wolfsclaw.*

Stalk creeping; *branches* ascending; *leaves* spread, ribless, bent inwards, terminating in hairs; *spikes* usually in pairs, cylindrical, footstalked; *bracteæ* ovate, pointed, erosodenticulated.

Lycopodium, *Raii Syn.* 107, 1.
Muscus clavatus seu Lycopodium, *Ger. em.* 1562; *Park.* 1307.
Lycopodium vulgare pilosum, amfragosum et repens, *Dill. M.* 441.
Lycopodium clavatum, *Lin. S. P.* 1564.
Clubmoss.

Heaths or hills; perennial; July, August.

Stalks whiplike, several feet long, creeping, branched leafy all around; *fruitbearing branches* upright, 4 in. high, loosely leafed, terminated by 1 to 3 cylindrical, leafy spikes an inch long; *bracteæ* broader at the bottom.

5. *Lycopodium alpinum.* *Alpine wolfsclaw.*

Branches erect, forked, bundled; *leaves* fourrowed, oblong, convex, acute, adpressed; *spike* terminal, single, sessile, round.

L. sabinæ facie, *Raii Syn.* 108, 3; *Dill. M.* 445.
Muscus clavatus foliis cupressi, *Ger. em.* 1562.
M. clavatus cupressiformis, *Park.* 1309, 1310.
Lycopodium alpinum, *Lin. S. P.* 1567.
Heath cypress.

Alpine rocks; perennial; August.

Stalk creeping, very long, few-leafed; *branches* 2 to 3 in. long, full-leafed; *leaves* imbricated, small, sharp-pointed, keeled, light green, not in the least nicked; *bracteæ* membranaceous, flat, dilated at the base, yellowish; *conceptacles* kidneyshape, yellow.

II. 19. BERNHARDIA. Beauvois. *Mountainmoss.*

Conceptacles capsular, cauline, three lobed, three valved, three celled; *partitions* median;

1. *Bernhardia spinosa.* *Thorny mountainmoss.*

Stalk creeping; *branches* upright, simple; *leaves* spread lanceolate, denticulate, ciliate; *spike* terminal, single, leafy, single.

Selaginoides foliis spinosis, *Raii Syn.* 106; *Dill. M.* 460.
Lycopodium Selaginoides, *Lin. S. P.* 1565.

Moist alpine heaths; perennial; August.

Stalk decumbent, branched; *branches* rising up at the end, two inches high, leafed all round, *leaves* light green, shining, rather erect; *bracteæ* larger than the leaves, spread horizontally.

? 2. *Bernhardia Helvetica.* *Swiss mountainmoss.*

Leaves oval, subacute, furrowed; two rows larger, and spread, two other rows smaller and adpressed; *stem* rooting.

Lycopodioides, *Raii Syn.* 108.

Mendip Hills, Lobel; but has not been found by any other person since.

III. 20. ISOETES. Linnæus. Gen. Pl. *Quillwort.*

Fructification radical, at the base of the leaves; *conceptacles* globular, not opening, many seeded?—*stem* creeping; *leaves* radical, in bundles.

Isoetes lacustris. *Lake quillwort.*

Leaves awlshape, halfround.

Subularia vulgaris erecta, folio rigidissimo, *Raii Syn.* 306, 1.
Calamaria folio breviore et compresso, *Dill. M.* 540.
Isoetes lacustris, *Lin. S. P.* 1563.

Bottom of alpine lakes; perennial; May and June.

Root tuberous, with numerous fibres; *fronds* numerous, 4 to 6 inches high, simple, four-celled, jointed, dilated at the base, membranaceous, bearing fruit in their inside, of two sorts, *a.* in the internal base of the frond, solitary; *b.* in the external base of the frond, size of a pea, roundish, rather compressed, membranaceous, two-celled, many seeded; *seeds* small, shagreened.

β. *gracilis.* *Leaves* long, slender.

Calamaria folio longiore et graciliore, *Dill. M.* 541.

γ. *fragilis.* *Leaves* very brittle, slender, pointed, transparent; *pores* numerous, minute.

Subularia fragilis, folio longiore et tenuiore. *Raii Syn.* 307, 3.

Fam. III. 3. MARSILEACEÆ. Brown. *Rhizospermæ*, De Candolle.

Fructifications radical; *involucrum* spherical, leathery, or membranaceous, not opening; *seeds* many.—Aquatic herbs.

21. PILULARIA. Vaillant. Fl. Par. 159. *Peppergrass.*

Involucrum solitary, subsessile, globular, leathery, four-celled.—*Young leaves* rolled up like those of ferns.

Pilularia globulifera. *Pillbearing peppergrass.*

Leaves threadlike.

Graminifolia palustris repens, vasculis granorum piperis æmulis, *Raii Syn.* 136.
Pilularia globulifera, *Lin. S. P.* 1563.
Pillwort.

In inundated gravelly places; perennial; June, July.

Stem creeping, rooting; *involucra* axillary, downy, brown, closed, four-celled, lined with sexual organs? *anthers?* above, yellow, clubshaped; *germens?* below, roundish, whitish.

Fam. IV. 4. EQUISETACEÆ. Richard. *Peltatæ*, Hoffman; *Filicum pars*, Linnæus, Jussieu; *Peltigeræ*, Batsch; *Gonostendes*, Willdenow.

Fructification terminal, in the peltate scales of an ament; *involucra* bivalve; *seeds?* numerous, naked, with four very hygrometrical threads twisting and untwisting round them. —*Plant* leafless; *branches* verticillate, furrowed, jointed; *joints* girt with a one-leaf sheath.

22. EQUISETUM. Plinii H. N. 26, 13. *Horsetail.*

Character, same as that of the order; there being no other genus.—*Herb* strongly astringent.

1. *Equisetum hyemale.* *Winter horsetail.*

Stem naked, erect, very rough, base rather branchy; *spike* terminal; *sheaths* white, with a black base and tip; *teeth* bearded, all falling off.

Equisetum nudum, *Raii Syn.* 131, 11; *Ger. em.* 1113.
E. junceum seu nudum, *Park.* 1201.
Equisetum hyemale, *Lin. S. P.* 1517.
Naked horsetail. Rough horsetail. Shavegrass. Dutch rushes.

In marshes and moist woods; perennial; July and August.

Stem half a yard high, sea-green, very rough; *sheaths* short; *amentum* ovate, black.

Used for polishing wood and brass; the epidermis abounding in silica.

β. *pauci folium.* *Leaves* few.

γ. *ramosum.* *Lateral branches* numerous.

2. *Equisetum variegatum.* *Variegated horsetail.*

Stem naked, branchy at the base, stiff, smoothish; *spike* terminal; *sheaths* black, white at the tip; *teeth* white, diaphanous, cuspidate.

E. nudum minus variegatum Basiliense, *Raii Syn.* 130, 3.
E. tenue, *Hoppe.*
Equisetum variegatum, *Willd. S. P.*

Banks of rivers; perennial; July.

Stem 6 inches high, quite simple, erect, round, slender, stiff, streaked, smoothish.

3. *Equisetum arvense.* *Cornfield horsetail.*

Barren stems simply branched, branches roughish, foursided; *fruitful stems* simple; *sheaths* cylindrical, distant, inciso-dentate; *teeth* acute.

E. arvense longioribus setis, *Raii Syn.* 130, 2; *Park.* 1202.
E. segetale and E. sylvaticum, *Ger. em.* 1114.
Equisetum arvense, *Lin. S. P.* 1516.

In moist cornfields and meadows; perennial; March and April.

Barren stems, high, branched in all parts; *sheaths* small; *branches* verticillate, spreading, angular; *angles* rather rough: *Fertile stems* earlier, 6 inches high; *sheaths* very long; *spike* lanceolate, long, large.

β. *elongatum.* *Branches* very long.
E. pratense, longissimis setis, *Raii Syn.* 131, 8.

4. *Equisetum fluviatile.* *River horsetail.*

Barren stems simply branched; *branches* rather rough, numerous, eightsided; *fruitful stems* simple; *sheaths* funnelshape, rather close, lacero-dentate; *teeth* bearded.

E. majus, *Raii Syn.* 130, 1; *Ger. em.* 1113.
E. majus palustre, *Park.* 1200.
E. eburneum, *Roth Germ.* 111.
E. fluviatile, *Lin. S. P.* 1517.
Great horsetail.

Marshes and river banks; perennial; April.

Barren stem 5 or 6 feet high, upright, branched; *branches* numerous, verticillate, long, usually simple, rough when viewed by a lens; *fruitful stems* very simple; *sheaths* short, brown, edge many-cut, bristly; *spike* very large.

5. *Equisetum limosum.* *Mud horsetail.*

Stalk naked, branched; *branches* about twelve, fivesided, smooth; *spike* terminal.

E. nudum lævius nostras, *Raii Syn.* 131, 10.
E. fluviatile, *Fl. Dan.* 1184.
E. limosum, *Lin. S. P.* 1517.
Smooth naked horsetail.

Marshes and watery places; perennial; June and July.

Stems two feet high, very smooth; *branches* few, erect, smooth, very rarely verticillate; *spike* large, brown, ovate; *barren stems* very simple, narrow at top.

β. *ramosum.* *Stem* branched.
E. foliis nudum ramosum, *Raii Syn.* 132, 12.

6. *Equisetum palustre.* *Marsh horsetail.*

Stem branchy, furrowed, smoothish; *branches* fivesided, simple, erect; *spike* terminal.

E. palustre, *Ger. em.* 1114; *Lin. S. P.* 1516.
E. palustre minus, *Park.* 1200.
E. palustre, *Raii Syn.* 131, 9.

Spongy bogs; perennial; June and July.

Stem deep furrowed, branched in every part; *branches* erect, long, simple, minutely scabrous; *sheaths* greenish, the edges whitish; *spike* terminating the stem, single, blackish, slender, formed of a few large, distant scales.

β. *tenuissimum.* *Branches* very long and slender.

E. palustre, tenuissimis et longissimis setis, *Raii Syn.* 131, 6.

γ. *polystachion.* *Upper branches*, as well as the stem, terminating in a spike.

E. palustre, minus, polystachion, *Raii Syn.* 131, 7.

7. *Equisetum sylvaticum.* *Wood horsetail.*

Stems doubly branched; *branches* rather rough, bowed down, foursided; *second branches* rather threesided.

E. sylvaticum, *Raii Syn.* 130, 4; *Ger. em.* 1114; *Lin. S. P.* 1516.
E. omnium minus tenuifolium, *Park.* 1201.
E. sylvaticum, *Tabern. Ic.* 253.

Moist woods and banks of rivulets; per. April and May.

Root creeping; *stems* erect, a foot high, very much branched, terminated by a single spike; *branches* furrowed; *spike* footstalked, upright, ovate, blunt, brown, tessulated.

β. *procumbens.* *Branches* pointing all one way.

E. sylvaticum, procumbens, setis uno verso dispositis, *Raii Syn.* 131, 5.

Fam. V. 5. CHARADEÆ.

Fructification monoicous, axillary; *bracteæ* 2, 3, or 4; *perigonium* transparent, fivecut; *anther?* sessile, single, globular, bursting in three or four parts; *pollen?* conglomerate with spiral threads; *nut* barked, crowned, turbinate, sessile, spirally streaked, onecelled, many-seeded; *seeds* very minute, spherical—*Plants* submersed, verticillate, fistulous, smooth or covered with a corklike bark, very brittle when dry.

23. CHARA. Vaillant. M.R.A. 1719. *Stonewort.*

No other genus in this order.

1. *Chara flexilis.* *Flexible stonewort.*

Stem utriculate, transparent, flaccid, very smooth, very branched; *branches* opposite, spreading; *second branches* verticillate, 6 or 8 in a whorl, leafless, 2 or 3 forked at the tip, simple, blunt; *nuts* without bracteæ, lateral.

Ch. translucens minor flexilis, *Raii Syn.* 133, 5.
Ch. flexilis, *Lin. S. P.* 1624.

In ponds and ditches; annual; July and August.

Green, smooth, not streaked.

β. *prolifera.* *Apex* fasciculate, proliferous.

C. nidifica, *Fl. Dan.* 761; *Smith Comp. F. A.* 2.
C. intricata, *Roth Cat.* 2, 125.
C. syncarpa, *Thuil. Fl. Par.* 472.

γ. *gracilis.* *Branches* twoforked, sharp-pointed; *leaves* awlshape.

C. translucens major flexilis, *Vaill. M. R. Ac.* 1719.
C. gracilis, *Smith Comp. F. A.* 3, 6.

2. *Chara stellata.* *Starred stonewort.*

Stem slender, reticulate, transparent, flaccid, branchy; *branches* opposite; *second branches* in whorls, double or triple forked, conglomerated together; *nuts* rounded, sitting in the diverging forks.

C. glomerata, vel C. tenuissima, *Des Vaux Journ Bot.* 2, 313.
Chara stellata, *Wallroth Ch.* 178.

Stem in tufts, an inch long, dark green; *branches* very short.

3. *Chara vulgaris.* *Common stonewort.*

Stem branchy, round, rather rough, with eight streaks; *second branches* eight streaked; *summit* leafless, not jointed, blunt; *bracteæ* four, unequal, two very long, twice the length of the nuts, the two lower ones the length of the nuts.

Chara vulgaris fœtida, *Vaill. M. R. A.* 1719; *Raii Syn.* 132, 1.
Equisetum fœtidum sub aqua repens, *Ger. em.* 1115; *Park.* 1201.
Chara montana, *Pers. Syn.* 530.
Chara vulgaris, *Lin. S. P.* 1624.

Muddy ponds and ditches; annual; July.

Plant submerged, fœtid, brittle, usually covered with a white chalky crust; *stem* a foot high, twisted.

β. *elongata.* *Second branches* very long, not jointed; *bracteæ* two.

Chara vulgaris elongata, *Wallroth.*
C. translucens major flexilis, *Vaill.?*

4. *Chara hispida.* *Hispid stonewort.*

Stem hispid, branchy, below sulcate, unarmed, above prickly; *prickles* reversed; *second branches* verticillate, eight in a whorl, six jointed, spreading; *bracteæ* unequal, four; nearly equal to the ovate nuts.

Chara hispida, *Lin. S. P.* 1624.

Ponds and ditches; annual; July, August.

Stems very numerous, thick, long, hispid all over.

β. *tomentosa.* *Stem* strong, hispid under the branches.

C. major subcinerea fragilis, *Raii Syn.* 132, 2.
C. tomentosa, *Lin. S. P.*

5. *Chara crinita.* *Hairy stonewort.*

Stem rather branchy, streaked, very smooth, shining, bristly; *bristles* spreading, condensed in bundles; *branches* verticillate, about ten in a whorl, roundish, sixkneed, short; *bracteæ* five, twice as long as the oblong, lanceolate, subperpendicular nuts.

Hippuris muscosa sub aqua repens, *Pluk. Alm.* 135.
Chara crinita, *Wallroth* 191.

Turf bogs in Ireland.

Subseries II. B. PLANTÆ ENDOGENÆ PHANEROGAMÆ.
Monocotyledones, Jussieu.

Fructifications visible, regular; the sexual organs distinct, and well marked.

FAMILIES.

1. *Ovaries* 1 *to* 4, *one-seeded; perigonium free or none; stamens hypogynous.*

Cariopsides 2 to 4; *stamens* 1, 2, or 4;
perigonium 0, or fourcut, herbaceous;
plant aquatic ..... FLUVIATILES. 6.

Berry 1-seeded; *stamens* many, on a spadix;
perig. 0; *spatha* convolute; *plant* terrestrial AROIDEÆ. 7.

Akenium 1; *stamens* 3; *stigmata* 1 or 2;
perig. 3-parted; *leaves* grassy; *plant* aquatic
TYPHACEÆ. 8.

Akenium 1; *stamens* 3; *style* 1; *stigmata* 2 or 3;
perig. glumaceous; *spathelle* 1; *leafsheaths* whole
CYPERACEÆ. 9.

Akenium 1; *stamens* 3; *styles* 2; *stigmata* 2;
perig. glumaceous; *spathelles* 2; *leafsheaths* slit
GRAMINEÆ. 10.

2. *Ovary* 1, 1 *to* 3-*celled, many-seeded; perigonium free; stamens perigynous.*

Valves of the capsule 2; *seeds* 2; *stamens* 4;
flowers aggregate ..... RESTIACEÆ. 11.

Valves 3; dissepiments none, or on the valves;
perig. glumaceous; *leaves* grasslike ..... JUNCEÆ. 12.

Valves 3; margin inflected to form the
dissepiments; *perig.* petaloid .... COLCHICACEÆ. 13.

Valves 3, bearing the dissepiments;
perig. petaloid; *seed* flat; *stigmata* 3. .. LILIACEÆ. 14.

Valves 3, bearing the dissepiments;
perig. petaloid; *seed* round, or angular;
stigma 1. ..... ASPHODELIACEÆ. 15.

Berry roundish; *leaves* linear, bundled;
spermodermis crustaceous, black ... ASPARAGEÆ. 16.
Berry roundish; *leaves* alternate, or verticillate; *spermodermis* membranaceous SMILACEÆ. 17.

3. *Ovary* 1, 3-*celled*; *perigonium adherent*; *stamens perigynous.*

Berry roundish; *leaves* petiolate;
spermodermis membranaceous ..... TAMACEÆ. 18.
Valves 3, bearing the dissepiments;
stamens 6; *anthers* opening by 2 pores AMARYLLIDEÆ. 19.
Valves 3, bearing the dissepiments;
stamens 3; *anthers* opening outwards .... IRIDEÆ. 20.

4. *Ovary* 1, 1 *or* 6-*celled*; *perigonium adherent*; *stamens epigynous.*

Stamens 1 or 2; *perigonium* irregular;
caps. 1-celled, 3-valved; *plant* terrestrial ORCHIDEÆ. 21.
Stamens 9 to 20; *perigonium* regular;
caps. 6-celled; *plant* aquatic HYDROCHARIDEÆ. 25.

5. *Ovaries* 3, 6, *or* 12; *perigonium free*; *stamens perigynous.*

Ovaries 6 or 12; *leaves* lanceolate;
seeds 1 or 3 erect, affixed to the suture ALISMACEÆ. 22.
Ovaries 6 or 12; *leaves* awlshape;
seeds many, affixed to the side of the capsule ..... BUTOMACEÆ. 23.
Ovaries 3 or 6; *leaves* awlshape;
seeds 1 or 2, affixed to the base .. JUNCAGINEÆ. 24.

Fam. I. 6. FLUVIATILES. Ventenat.

Flower unisexual, or hermaphrodite; *perigonium* none or fourcut, free, herbaceous; *stamens* 1 to 4; *ovaries* many, free; *style* sometimes wanting; *stigmata* simple; *cariopsides* one-celled, one-seeded; *seed* inverse or appended; *embryo* across the seed; *perisperm* none,—*Plants* herbaceous, aquatic; *roots* fibrous; *leaves* mostly sheathing, either opposite or verticillate; *flowers* axillary, terminal, sometimes solitary, but mostly in a spike or on a spadix.

1. *Flowers unisexual; stamens* 1 *or* 2.

Fl. on a one-sided spadix; *ovary* 1..... ZOSTERA. 27.
Fl. solitary; *ovaries* 2 to 6, sessile, gibbous
ZANNICHELLIA. 24.

2. *Fl. hermaphrodite; stamens* 4; *perigonium* 4-*cut.*

Fl. two-rowed on a solitary spadix;
cariopsides 4, on footstalks ..... RUPPIA. 25.
Fl. spiked; *cariopsides* 4, sessile.... POTAMOGITON. 26.

I. 24. ZANNICHELLIA. Micheli. *Pondweed.*

Flowers solitary, monoicous.—MALE. *Perigonium* none; *stamen* 1; *filament* long; *anther* 2 or 4-celled.—FEM. *Perigonium* campanulate; *ovaries* 2 to 6; *stigmata* flat, peltate; *capsule* one-seeded, sessile, compressed. — *Flowers* axillary; the male at the exterior base of the perigonium of the female flower; *leaves* linear, grasslike, 2 or 3 from the same membranaceous sheathing stipula.

1. *Zannichellia palustris.* *Marsh pondweed.*
Anthers 4-celled; *stigmata* undivided; *capsule* keeled, toothed at the back.

Aponogeton aquaticum graminifolium, staminibus singularibus, *Raii Syn.* 135.
Zannichellia palustris, *Lin. S. P.* 1375.
Horned pondweed.
Ponds and ditches; annual; July.

2. *Zannichellia dentata.* *Toothed pondweed.*
Anthers 2-celled; *stigmata* scolloped; *capsule* warty.

Z. palustris minor, *Mich. N. G. P.* 71.
Z. palustris β, *Lin. S. P.* 1375.
Z. dentata, *Willd. S. P.*
Ponds and ditches; annual; July.

II. 25. RUPPIA. Lin. Gen. Pl. *Tasselgrass.*

Flowers hermaphrodite, two-rowed on a solitary spadix; *perigonium* caducous, 2 valved; *stamens* four; *anthers* sessile, 2-celled; *ovaries* four, oval, conic; *stigmata* obtuse; *nuts* four, oneseeded, oval, on a long threadlike peduncle. *Plant* herbaceous, capillary, branchy; *leaves* cauline, alternate; *floral leaves* mostly opposite; *spadix* terminal.

Ruppia maritima. *Sea tasselgrass.*
Leaves linear, not nicked at the tip.

Potamogiton maritimum gramineis longioribus foliis, fructu fere umbellato, *Raii Syn.* 134.
Bucca ferrea maritima, foliis acutissimis, *Mich. N. P. G.* 72.
Ruppia maritima, *Lin. S. P.* 184.

Salt water ditches; perennial? July.

Flowering spike above the water, the peduncles lengthening as the depth of water requires.

III. 26. POTAMOGITON. Dioscorides. *Riverweed.*

Flowers hermaphrodite, spiked; *spikes* furnished at the base with 2 spathes; *perigonium* 4-parted; *stamens* 4: *filaments* flat, short; *anthers* 2-celled; *ovaries* 4, oval, pointed; *nut* 1-seeded, sessile.—*Leaves* mostly alternate; *floral leaves* sometimes opposite; *spike* terminal or axillary.

a. *Leaves of* 2 *sorts*, 1. *floating, opake, convex*; 2. *under water.*

1. *Potamogiton natans.* *Floating riverweed.*

Upper leaves elliptical, petiolate, acute; base roundish cordate, floating; *lower leaves* linear, submersed.

Pot. rotundifolium, *Raii Syn.* 148, 1.
Pot. latifolium, *Ger. em.* 821.
Fontinalis major latifolia vulgaris, *Park.* 1254.
Potamogiton natans, *Lin. S. P.* 182.

Rivers and ponds; perennial; June.

Stem very long, leafy; *peduncle* single, with linear bracteæ at the base; *spike* simple, above water; *flowers* dirty-green.

β. *terrestris.* Sheath of the peduncle less than half its length.

2. *P. heterophyllum.* *Various-leaved riverweed.*

Upper leaves floating, petiolate, elliptical, oblong, acute, membranaceous, narrowed at both ends; *lower leaves* under water, crowded, sessile, linear lanceolate.

Pot. gramineum, *Fl. Danica*, 222.
Pot. palustre, *Teesdale, Tr. L. S.* 5, 43.
Pot. crassipes, *Kartach.*
Pot. distachyos, *Bellard.*
Pot. hybridum, *Thuill. Fl. Par.*
Pot. natans γ, *Lam. Illustr.*
Pot. heterophyllum, *Schreb. Spic.* 21.

Ponds and ditches; perennial; July to September.

Stem much branched, leafy; *leaves* pale green, scored; *Sheaths* oblong, bluish; *spike* greenish.

3. *Potamogiton fluitans.* *Floating riverweed.*

Upper leaves floating, lanceolate oval, narrower at both ends; *peduncles* long; *lower leaves* under water, linear, lanceolate acute.

Pot. natans β, *Poiret Enc. Meth.* 5, 579.
Pot. fluitans, *Roth Fl. Ger.* 1, 72.

Ponds and rivers; perennial; August and September.

Root creeping; *stem* flat, very long; *branches*, leafy; *leaves* reddish green, finely veined, alternate; *sheath* wide, spearshape; *spike* dense, reddish.

b. *Leaves all of one sort.*

4. *Potamogiton lucens.* *Shining riverweed.*

Leaves ovate, lanceolate, flat, ending in a short petiole, shining, veined; *stipulæ* the length of the joints; *spikes* many flowered, crowded.

P. aquis immersum, folio pellucido lato oblongo acuto, *Raii Syn.* 148, 2.
P. longis acutis foliis, *Ger. em.* 822.
P. lucens, *Lin. S. P.* 183.

Running and stagnant waters; perennial; June, July.

Plant keeps under water, with only the spike above the surface; *flowers* reddish; *stipulæ* embracing the stem, leaflike.

β. *angustifolium.* *Leaves* narrow; *plant* smaller.

P. folio angusto, pellucido, fere gramineo, *Raii Syn.* 148, 3.

γ. *nudum.* *Leaves* ovate, lanceolate; *petioles* scarcely margined.

5. *Potamogiton crispum.* *Crisp riverweed.*

Leaves lanceolate, alternate, sessile, waved, serrate; *stipulæ* with the tip torn and ciliate; *stem* slightly compressed.

Pot. seu Fontinalis crispa J. Bauhini, *Raii Syn.* 149, 7.
Tribulus aquaticus minor, quercus floribus, *Ger. em.* 824.
Pot. crispum, *Lin. S. P.* 183.
Greater water caltrops.

Ponds and slow running waters; perennial; June, July.

Leaves sunk, obtuse; *peduncles* sunk; *spike* fewflowered; *flowers* reddish, remote.

β. *serratum.* *Leaves* serrated; *upper leaves* opposite.

6. *Potamogiton lanceolatum.* *Spearshape riverweed.*

Leaves linear, lanceolate, flat, not nicked, verrucose, broader than the stipulæ, narrow at the base; *peduncle* thickened, shorter than the leaves; *spike* ovate, dense, fewflowered.

Potamogeton setaceum, *Lin. S. P.* 184?
Potamogeton lanceolatum, *Eng. Bot.* 1985.
Potamogeton gramineum, *Wahl. Fl. Lapp.* 52.

Mountain lakes; perennial; July and August.

Root creeping; *stem* floating, branched, slender, round; *leaves* bluntish, thin, flat, 1-ribbed, reticulately veined; *stipula* involute, tubular, acute; *peduncles* single, as long as the leaf; *spike* 8 to 12-flowered; *flowers* small.

7. *Potamogiton perfoliatum.* *Thorow riverweed.*

Leaves cordate, amplexicaul, shining, singleribbed; *stem* round, recurved.

Potamogiton perfoliatum, *Raii Syn.* 149, 4.
Pot. tertium Dodonæi, *Ger. em.* 822.

Rivers and ponds; perennial; July, August.

Stem subdichotomous, alternately branched; *leaves* brittle, pellucid, very smooth, nearly all alike; *stipulæ* none; *spike* erect, oblong, brown.

8. *Potamogiton densum.* *Close riverweed.*

Leaves ovate, pointed, opposite, crowded; *stem* round, forked; *spike* usually 4-flowered; *peduncle* slender, terminal.

P. seu Fontinalis media lucens, *Raii Syn.* 149, 6.
Tribulus aquaticus minor, muscatellæ floribus, *Ger. em.* 823.
Trib. aquaticus minor alter, *Park.* 1248.
Potamogeton densum, *Lin. S. P.* 182.
Lesser water caltrops. Frogs' lettuce.

Still and slow moving waters; perennial; June.

Herb sunk; *stem* closely leaved; *spike* sometimes 2-flowered, pale green.

9. *Potamogiton compressum.* *Flat riverweed.*

Leaves linear, obtuse, with 2 glands at the base; *stem* compressed; *spike* fewflowered; *stipulæ* broader than the leaves.

P. caule compresso, folio graminis canini, *Raii Syn.* 149, 8.
Potamogeton compressum, *Lin. S. P.* 183.

Ditches and slow running water; perennial; June, July.

Stem bent; *leaves* pale green, alternate; *peduncle* flattened, rising above the water, 4 or 6-flowered, in distant pairs.

β. *oppositifolium.* *Stem-leaves* opposite.

γ. *majus.* *Leaves* larger and broader than usual.

10. *Potamogiton pectinatum.* *Featherleafed riverweed.*

Leaves bristlelike, alternate, the two upper ones opposite, parallel, close together, sheathing at the base; *spike* peduncled, thin, often interrupted.

Pot. millefolium, seu foliis gramineis, ramosum, *Raii Syn.* 150, 14.
Potamogeton pectinatum, *Lin. S. P.* 183.
Fennel-leaf pondweed.

Rivers and ponds; perennial; July.

Root creeping, originally tuberous; *stem* sunk, flowering in still water only, long, filiform, branchy, jointed, whitish; *sheath* prolonged at top into a small membranaceous ligula.

11. *Potamogiton marinum.* *Sea riverweed.*

Leaves linear, alternate, 2-rowed, sheathing; *margin* of the sheath scariose; *spike* fewflowered, very much interrupted.

Pot. maritimum ramosissimum grandiusculis capitulis, capillaceo folio, *Raii Syn.* 150, 13.
Potamogeton marinum, *Lin. S. P.* 183.

Salt water ditches; perennial; July.

Stem firm, reddish; *joints* short; *sheath* white; *leaves* opake and shining.

12. *Potamogiton Vaillantii.* *Vaillant's riverweed.*

Leaves linear, alternate, 2-rowed below, sheathing, above opposite, subspathaceous; *spike* ovate, fewflowered; *flower* rather large.

P. ingens gramineo folio longiore, *Vaill. Paris.* 32.
P. marinum, *Teesdale Lin. Tr.* 5, 43.
P. Vaillantii, *Roemer and Schultze Syst. Veg.*

Stem long, naked below, branchy above, compressed, deeply streaked, yellowish; *lower leaves* 4 in. long, very narrow; *upper leaves* 2 or 3 in. long; both light sea-green; *spike* 6 or 8-flowered, crowded together.

13. *Potamogiton gramineum.* *Grass riverweed.*

Leaves linear, lanceolate, alternate, sessile; *stipulæ* narrower than the leaves; *stem* round, rather forked.

P. gramineum latiusculum, foliis et ramificationibus densissime stipatis, *Raii Syn.* 149, 10.
Potamogeton gramineum, *Lin. S. P.* 184.

Ditches and rivers; perennial; July.

Plant sunk; *stem* slender, bent; *leaves* close; *stipulæ* involuto-turbinate; *spikes* ovate, fewflowered, close, from the forks of the stem; *peduncles* as long as the spike.

14. *Potamogiton pusillum.* *Dwarf riverweed.*

Leaves linear, opposite and alternate, distant, spreading at the base, narrower than the stipulæ; *stem* round, very slender, branchy; *peduncles* axillary: *spike* many flowered.

Pot. pusillum, gramineo folio, caule tereti, *Raii Syn.* 150, 15.
Potamogeton pusillum, *Lin. S. P.* 184.

Ditches and ponds on a clay bottom; perennial; July.

Plant sunk, except the spike when in flower; *stipulæ* embracing the stem; *peduncles* solitary, longer than the spike; *spike* ovate, small.

IV. 27. ZOSTERA. Linnæus. *Grasswrack.*

Flower monoicous or dioicous, resting on a one-sided leaflike spadix; *perigonium* none; *anther* round; *pollen* connected by fibres; *style* 2-cut; *capsule* membranaceous, 1-seeded.—*Root* fibrous; *stem* round, decumbent, rooting at the joints, leafy; *leaves* flat, linear, alternate, grasslike; *spadix* flat, from a cleft in the leaflike, sessile spatha.

Zostera marina. *Sea grasswrack.*

Leaves not nicked, slightly 3-nerved; *stem* roundish.

Alga, *Ger. em.* 1569; *Raii Syn.* 52, 1.
A. marina gramina minor, *Raii Syn.* 52, 2.
A. marina graminea angustifolia seminifera ramosior, *Raii Syn.* 52, 3.
Alga q. Potamogeiton marinum in utriculis epiphyllospermon minus Doody, *Raii Syn.* 53, 4.
A. angustifolia vitriariorum, *Raii Syn.* 53, 5.
Fucus marinus sive Alga marina graminea, *Park.* 1242.
Zostera marina, *Lin. S. P.* 1374.

Sea-shores, saltwater ditches; perennial; August.

Stem smooth, kneed; *leaves* opening a little above the base with a longitudinal slit, exserting a linear spadix bearing flowers on one side; *anther* single, sessile, at the side of the germen; *germen* oblong, sessile; *stigmata* two, linear; *capsule* elliptic, hanging.

The scaly hairs at the base of this plant, being detached and felted into balls by the action of the waves of the sea, and roasted to blackness, are used in diseases of the lymphatic system, in the same manner and with the same intent as burnt sponge.

β. *latifolia.* *Leaves* broad, very evidently 3-ribbed.

II. 7. AROIDEÆ, Jussieu; *Piperitarum pars*, Lin.

Flowers monoicous, sessile, round a simple spadix; *involucrum* a one-leafed spatha; *perigonium* none; *stamens* numerous, aggregated round the spadix; *anthers* inverse;

ovaries separate from the stamens, in the lower part of the spadix; *berry* round, one-celled; *seed* albuminous; *corculum* straight, in the centre of the perisperm; *radicle* below.—*Plants* herbaceous, stemless; *leaves* radical, petiolate, base slightly sheathing; *spadix* inclosed in a spatha, terminal; *scape* radical; *spatha* hooded, convolute at the base.

Roots contain much fecule mixed with a very acrid, volatile matter, which may be separated by heat or washing; fecules nutritious, used for food; acrid matter stimulant, used as a vesicatory or escharotic; and internally, much diluted, in consumptive cases. *Leaves* stimulant and acrid.

28. ARUM. Dioscorides, 2, 197. *Cuckowpint.*

Spatha one-leafed, cucullate, convolute at bottom; *spadix* naked at the tip, bearing the stamens in the middle, and ovaries at the base; *anthers* in several rows; *berry* one-celled, one-seeded.

Arum vulgare. *Common cuckowpint.*

Radical leaves hastato-sagittate, lobes deflexed; *spadix* clubshape, shorter than the spatha.

Arum, *Raii Syn.* 266.
A. vulgare, *Ger. em.* 834; *Park.* 373.
A. maculatum, *Lin. S. P.* 1370.
Wake Robin. Lords and Ladies.

Woods and hedges; perennial; May.

Root tuberous, fleshy; *herb* stemless; *leaves* radical, petiolate, spotted; *scape* simple, a foot high, terminated by the spatha; *spatha* erect, bellied, pale green, coloured within; *spadix* coloured at the tip, having numerous sterile filaments? just above the ring of anthers; *anthers* sessile, crowded; *ovaries* sessile; *berries* fine red, juicy.

Root stimulant, and starch is made from it.

β. *immaculatum.* *Leaves* not spotted.

III. 8. TYPHACEÆ. De Candolle; *Typhæ*, Jussieu. *Aroidæarum sectio*, Brown.

Flowers monoicous, aggregated in unisexual aments; *perigonium* three-parted; *stamens* 3, opposite to the lobes of the perigonium; *anthers* inverse; *ovaries* free, one-seeded; *ovule* pendulous; *style* one; *stigma* one; *akenium* drupaceous; *perisperm* fleshy; *corculum* central, straight; *radicle* below, inverse.—*Plant* gramineous, perennial; *root* tuberous; *leaves* sheathing, alternate, ensiform; *aments* terminal or lateral, naked.

Ament roundish; *fruit* sessile;
setæ none; *stigma* linear ..... SPARGANIUM. 29.
Ament roundish; *fruit* sessile;
setæ none; *stigma* peltate ..... PLATANARIA. 30.
Ament cylindrical; *fruit* pedicelled;
setæ girding the fruit .... TYPHA. 31.

I. 29. SPARGANIUM. Dioscorides. *Burreed.*

Ament roundish, axillary; *perigonium* 3-lobed, deciduous; *stamens* three; *filaments* capillary; *anthers* oblong; *ovary* turbinate; *style* short; *stigma* 1 or 2, linear, long, acute; *akenium* 1–2 seeded; not girt with bristles.—*Root* creeping; *leaves* three-edged; *stem* branchy; *ament* lateral, on a flexuose peduncle; *upper aments* male.

1. *Sparganium ramosum.* *Branched burreed.*
Leaves 3-edged at the base, sides concave; *peduncle* branched.

Sparg. ramosum, *Raii Syn.* 437, 1; *Ger. em.* 45; *Park.* 1205.
Sparg. erectum, *Lin. S. P.* 1378.

Ditches and river-banks; perennial; June, July.

Stem about 3 feet high; *peduncles* alternately branched, many flowered, bent at bottom; *flowerheads* alternate, sessile, many flowered; *upper heads* male, numerous; *lower heads* female.

2. *Sparganium simplex.* *Unbranched burreed.*
Leaves 3-edged at the base, sides flat; *peduncle* simple.

Sparg. non ramosum, *Raii Syn.* 437, 2; *Park.* 1205.
Sparg. latifolium, *Ger. em.* 41.
Sparg. erectum β. *Lin. S. P.* 1378.

Ponds in a gravelly soil; perennial; July, August.

Stem and *peduncle* not branched; *lowest flowerhead* sometimes pedicelled; *calyx* greenish.

II. 30. PLATANARIA. Dodonæus. *Ribbandwort.*

Ament round, axillary; *perigonium* 3-leaved, deciduous; *stamens* 3; *filaments* capillary; *ovary* subturbinate; *style* short; *stigma* ovate, peltate; *akenium* one-seeded, not girt with setæ.—*Root* creeping, perennial; *stem* and *leaves* flat, flaccid, semipellucid, reticulate, floating; *peduncle* unbranched; *female flowerheads* 2 or 3, the lowest pedicelled, *malehead* usually single, terminal.

Platanaria natans. *Floating ribbandwort.*
Leaves decumbent, flat.
Sparganium minimum, *Raii Syn.* 437, 3; *Park.* 1205.
Sp. natans, *Lin. S. P.* 1378.
Sp. simplex β, *Huds. Fl. Ang.* 401.
Rivulets and ponds in muddy soils; perennial; July.

III. 31. TYPHA. Theophrastus. *Reedmace.*
Ament cylindrical, terminal; *filament* one; *anthers* three, oblong, quadrangular; *ovary* pedicelled; *peduncle* long and girt at the base with pappi; *style* awlshape, persistent; *stigma* simple.—*Root* creeping; *culm* erect, simple; *leaves* swordshape, sheathing at the base; *male ament* above.

1. *Typha latifolia.* *Broadleaf reedmace.*
Leaves linear, flat, rather swordshape; *male* and *female spikes* close together; both cylindrical.
Typha, *Raii Syn.* 436, 1; *Ger. em.* 46.
T. palustris maxima, *Park.* 1204.
T. latifolia, *Lin. S. P.* 1377.
T. major, *Curtis Fl. Lond.* 3, 61.
Ponds and slow rivers; perennial; July.
Culm 6 to 8 feet high, erect, not branched, jointless, leafed at the bottom; *leaves* upright, nearly as long as the culm, linear, sharp pointed; *ament* terminal, upright, many-flowered, close; *male flowers* above, rather leafy, yellow; *females* below, brown.
Pollen abundant, used to produce flashes of fire; *leaves* used for basket-work and mats.

2. *Typha angustifolia.* *Narrowleaved reedmace.*
Leaves linear, channelled, convex on the back; *male* and *female spikes* remote from one another, both cylindrical.
Typha palustris media, *Raii Syn.* 426, 2.
T. minor, *Park.* 1204; *Curtis Fl. Lond.* 3, 62.
T. angustifolia, *Lin. S. P.* 1377.
Ponds and ditches; perennial; June, July.
Culm about three feet high, slender; *leaves* semicylindrical below.
Used also for baskets and mats.

β. *minor.* *Spike* and *leaves* slender.
Gravelly soils.

3. *Typha media.* † *Mean reedmace.*
Leaves linear, channelled; *culm* naked, sheathed at the base; *female spike* short, thick, remote from the male.

Typha palustris minor, *Raii Syn.* 436, 3.
Typha minor, *Smith Fl. Br.* 960.
Typha angustifolia β, *Lin. S. P.* 1378.
Typha media, *De Candolle Syn. Fl. Gall.* 1806.
Typha minima, *Willd. S. P.* 4, 198; *De Cand. S. F. G.* 1807.

Marshes; perennial; April, May.

Culm 3 feet long, naked, sheathed at the base; *sheaths* large, split to the bottom into jags resembling leaves, flat, broad, acuminate at the point; *leaves* radical, as long as the culm, setaceous, very narrow, deeply channelled, convex on the back, the outer leaves shorter than the rest.

IV. 9. CYPERACEÆ. De Candolle; *Cyperoideæ*, Jussieu.

Flowers hermaphrodite, or unisexual, glumaceous, spiked; *glume*, of one spathelle, imbricate; *glumelle* none, bristle-shape, or 1 or 2 spathellules; *stamens* 3, hypogynous; *anthers* terminal, affixed by its base, 2-celled; *ovary* free, 1-seeded; *style* 1; *stigmata* 2 or 3; *akenium* crustaceous, bony or subdrupaceous, naked, or bristled, or covered with a capsule perforated at top, formed of the spathellules soldered together; *seed* erect; *perisperm* farinaceous; *corculum* very small near the hilum, sometimes external.—*Herb* perennial, grasslike; *culm* simple, round, or 3-sided, without knotty joints; *leaves* sheathing; *sheaths* not slit lengthways; *bracteæ* mostly sessile; *spathelle* spiked; *lower spathelles* mostly empty.

1. *Spathelles imbricated all round; flowers unisexual; akenium inclosed in the hardened glumelle.*
Caricæ. a.

Spathellules 2, soldered, inclosing the akenium; *stigmata* two . . . . . CAREX. 32.
Spathellules 2, soldered, inclosing the akenium; *stigmata* three . . . . . TRASUS. 33.
Spathellule 1, involute, inclosing the akenium; *stigmata* three . . . . . COBRESIA. 34.

2. *Glumes two-rowed; flowers hermaphrodite; glumelles none, or bristle-like. Cyperaceæ.* b.

Style not jointed, deciduous; *stamens* 3; *glumelle* 0; *spikes* umbelled . . . . . CYPERUS. 35.
Style not jointed, deciduous; *stamens* 3; *glumelle* 0; *spikes* capitate . . . . . SCHŒNUS. 36.
Style not jointed, deciduous; *stamens* 2; *glumelle* 0; *akenium* drupaceous . . . . . CLADIUM. 37.

Style not jointed, deciduous;
glumelles setaceous, shorter than the glume.
CHÆTOSPORA. 38.

Style jointed, persisting, dilated at bottom;
glumelle setaceous, shorter than the glume.
RHYNCOSPORA. 39.

3. *Glumes imbricate all round; flowers hermaphrodite; glumelles none, or bristlelike. Scirpideæ.* c.

Style jointed, persisting, dilated at bottom;
spathellules 4, setaceous, shorter than the glume
ELEOCHARIS. 40.

Style not jointed, deciduous;
glumelle none. ..... ISOLEPIS. 41.

Style not jointed, deciduous;
spathellules 4 or 6, setaceous, shorter than the glume.. ..... SCIRPUS. 42.

Style not jointed, deciduous;
spathellules 6, setaceous, denticulate, longer than the glume ..... TRICHOPHORUM. 43.

Style not jointed, deciduous;
spathellules many, setaceous, woolly, longer than the glume ..... ERIOPHORUM. 44.

A. CARICEÆ. *Spathelles* imbricate all round the spike; *flowers* unisexual; *akenium* inclosed in the hardened glumelle.

Roots generally diaphoretic, demulcent, and resolvent, and may be substituted for sarsaparilla.

I. 32. CAREX. *Carex.*

Flowers monoicous or dioicous, spiked; *spikelets* androgynous or unisexual; *spathelles* imbricate all round; *spathellules* two, joined by the edges, perforated at top, persisting, cartilaginous; *stamens* 3; *style* 1; *stigmata* 2; *akenium* 1, inclosed in the persistent spathellules.—*Root* perennial, fibrous, or creeping; *culm* 3-sided; *leaves* sheathing, rough on the edges; *sheath* whole; *bracteæ* mostly embracing the stem, not sheathing; *spikes* simple or compound, mostly androgynous.

Synoptic view of the species.

1. *Spikes quite simple.*

Root creeping;
fruit short, spreading ..... *C. dioica.* 1.
Root fibrous; *culm* roughish;
fruit rounded at bottom, becomes reflexed *C. Davalliana.* 2.
Root fibrous; *culm* smooth;
fruit sharp at both ends, becomes reflexed *C. pulicaris.* 3.

2. *Spikes compound; spikelets sessile, androgynous.*

a. *Spikelets aggregate, capitate.*

Spikes linear;
fruit oblong, depressed . ..... *C. simpliciuscula.* 4.
Spikes ovate; *fruit* ovate, beaked . ..... *C. incurva.* 5.

b. *Spikelets panicled.*

Spikelets compressed, not two-rowed,
female above and below, male between . . *C. intermedia.* 10.
Spikelets two-rowed,
male above, female below, androgynous between;
stem crooked; *root* creeping . ..... *C. arenaria.* 11.
Spikelets two-rowed,
male above, female below, androgynous between;
stem erect; *root* fibrous ..... *C. Witheringii.* 12.
Spikelets loose, branches distant,
male above, female below; *glumes* brown;
fruit small, shining, not diverging ..... *C. paniculata.* 7.
Spikelet contracted,
male above, female below; *glumes* ferruginous;
fruit small, shining, not diverging .... *C. teretiuscula.* 6.
Spikelet decompound,
male above, female below; *culm* thick, very acute;
fruit large, green, diverging ..... *C. vulpina.* 9.
Spikelet short, simple, oblong, interrupted,
male above, female below;
fruit large, green, diverging ..... *C. muricata.* 13.
Spikelet elongated, branchy at bottom,
male above, female below;
fruit large, green, diverging ..... *C. divulsa.* 8.

c. *Spikelets alternate, male in the upper part.*

——— *C. divisa.* 14.

d. *Spikelets alternate, female in the upper part.*

Lower spikelets 3 to 5 together, remote. *C. axillaris.* 20.
Lower spikelet single; *bracteæ* very long;
fruit ovate, flattened, 2-cut ..... *C. remota.* 19.
Lower spikelet single;
fruit dilated at bottom, angular, diverging, stellate.
C. stellulata. 17.
Lower spikelet single; *culm* rough;
fruit round at both ends, diverging ..... *C. elongata.* 16.
Lower spikelet single;
fruit not diverging; *spikelets* all approximating.
C. ovalis. 15.
Lower spikelet single; *glumes* pale;
fruit erect; *spikelets* 5 or 6, interrupted .... *C. curta.* 18.

3. *Spikes of different sexes.*

Glumes obtuse; *spikes* sessile;
fruit persisting, ovate, obtuse ..... *C. cæspitosa.* 23.
Glumes obtuse; *lower spike* peduncled;
fruit persisting, compressed, flat; *apex* bent,
not nicked ..... *C. rigida.* 21.
Glumes obtuse; *lower spike* peduncled;
fruit persisting, elliptical, inflated; *apex* 2-cut. *C. pulla.* 22.
Glumes acute;
fruit deciduous, broad, compressed, acute, green
C. stricta. 24.
Glumes acute;
fruit deciduous, slender, blunt, brown ..... *C. acuta.* 25.

a. *Carices with a simple spike.*

1. *Carex dioica.* *Dioicous carex.*

Spikes oblong, dioicous; *fruit* ovate, rather upright, convex, ribbed; *upper edge* hispid; *leaves* threadshape; *culm* smooth; *root* stoloniferous.

Gramen cyperoides spica simplici cassa, *Raii Syn. ed.* 2, 267. *The male plant.*
Gramen cyperoides minimum, ranunculi capitulo rotundo, *Raii Syn.* 425, spic. 15. *The female plant.*
Carex dioica, *Lin. S. P.* 1379.
Carex lævis, *Hoppe.*

Bogs; perennial; May and June.

Culm not branched, 3-sided, 4 to 10 in. high; leafy at the bottom; *leaves* smooth, shorter than the culm; *male spike* linear, acute, upright, an inch long; *female spike* shorter.

β. *elongata.* *Spikes* longer than usual.

Gramen cyperoides minus ranunculi capitulo longiore, *Raii Syn.* 425, spic. 16.

γ. *androgyna.* *Spikes* androgynous, *female flowers* few, at the base.

2. *Carex Davalliana.* *Davall's Carex.*

Spikes sublinear, dioicous; *fruit* attenuated, recurved, ribbed, upper edge rough; *apex* not notched; *culm* acute-angled, serrulate; *leaves* very short; *root* tufted.

Carex Davalliana, *Goodenough L. T.* 5, 266.
Carex dioica, *Willd. Cat. B.* 16.
Carex scabra, *Hoppe.*
Carex dioica Davalliana, *Wahl. A. H.* 1803, 138.

Bogs; perennial; June, July.

Root fibrous; *culm* 3-sided, 8 in. high, rough; *leaves* shorter than the culm; *spikes* linear, very slender, acute, erect; *female spikes* few, short; *glumes* brown.

3. *Carex pulicaris.* *Flea carex.*

Spikes above male; *fruit* oblong, roundish, smooth, reflexed, divaricated, sharp at both ends; *glumes* oblong, persistent, longer than the fruit; *root* fibrous.

Gramen cyperoides minimum, seminibus deorsum reflexis puliciformibus, *Raii Syn.* 424, spic. 13.
Carex pulicaris, *Lin. S. P.* 1380.
Carex psylliphora, *Lin. Suppl.* 413.
Fleagrass.

Muddy bogs; perennial; June.

Culm a foot high, smooth, slender; *leaves* setaceous, smooth; *spikes* linear, erect; *glumes* brownish grey; *fruit* brown, very shining, not notched at the tip.

b. *Carices with a compound, androgynous spike.*

4. *Carex simpliciuscula.* *Plain carex.*

Spike crowded, clubshape; *fruit* oblong, depressed, beak short, mouth not notched; *leaves* very slender, convolute.

Carex simpliciuscula, *Wahlenberg, Act. Holm.* 1803, 141.

Westmoreland mountains; sent to him by Mr. Turner.

5. *Carex incurva.* *Bent carex.*

Spikes roundish, ovate, capitate; *fruit* ovate, semiglobose, beaked, mouth very slightly notched; *glumes* ovate, acute, rather mucronate; *culm* roundish, smooth, slightly bent; *leaves* setaceous, grooved; *root* creeping.

Carex juncifolia, *Allioni Fl. Ped.* 2296.
Carex incurva, *Lightfoot Fl. Scot.* 544.

Deep sands at mouths of rivers; perennial; July, August.

Root long; *culm* 6 in. high; *leaves* few; *bracteæ* shorter than the spikelets; *spikelets* roundish, fewflowered; *glumes* broad, blunt, brown; *fruit* mucronate, acute, angles smooth.

Root, when fresh, sudorific, and, like that of many other species, may be used for sarsaparilla.

6. *Carex teretiuscula.* *Roundish carex.*

Spikelets panicled, contracted; *fruit* ovate, apex two-toothed; angles ciliated, serrated; *culm* bluntly 3-sided, sides convex; *root* creeping.

Carex teretiuscula, *Goodenough L. T.* 2, 163.

Bogs; perennial; May.

Leaves erect, ridged; *sheaths* leafless at the base, deeply striated; *culm* 18 in. high, roundish; *spike* ovate, oblong, decompound, contracted; *spikelets* sessile, ovate; *glumes* ferruginous, acute, with a white, scariose edge.

7. *Carex paniculata.* *Panicled carex.*

Spikelets panicled; *fruit* ovate, angles margined above, margin ciliate-serrate, apex two-toothed; *culm* acutely 3-sided, sides concave; *roots* fibrous, matted.

Gramen cyperoides palustre elatius, spica longiore laxa, *Raii Syn.* 422, spic. 1.
Carex paniculata, *Lin. S. P.* 1383.

Bogs and watery places; perennial; June.

Leaves erect, firm, light green; *sheaths* many, obtuse, leafless, imbricate, blackish brown, shining; *culm* 3 feet high, upright; *panicle* loose, branches distant, lower branches naked at bottom, top drooping; *bracteæ* ovate, margin scariose, keel ending in an awn; *glumes* acute.

β. *composita.* *Panicle* much branched above.

γ. *simplex.* *Panicle* simple; *lower spikelets* distant.

8. *Carex divulsa.* *Interrupted Carex.*

Spike branchy at bottom; *spikelets* ovate, upper spikelets male, close; lower spikelets female, distant; *fruit* rather upright, ovate, planoconvex, apex 2-toothed and margined, margin smooth.

Gramen cyperoides spicatum minus, spica longa divulsa seu interrupta, *Raii Syn.* 424, spic. 10.
Carex divulsa, *Goodenough L. T.* 2, 160.
Carex canescens, *Huds. Fl. Ang.* 405.
Carex loliacea, *Schreber Spicil.* 64?

Damp woods; perennial; May.

Culm 3-sided, sides flat, angles rough, 18 inches high; *leaves* slender; *sheaths* light green; *spike* long, but interrupted in the lower part and branched; *spikelets* 6 or 8, ovate when ripe, slightly squarose; upper spikelets sessile, close, nearly confluent; middle spikelets distant; lowest spikelets 1 or 2, distant, often compound, or on a short branch; *bracteæ* slender, setaceous; *glumes* acute, scariose.

9. *Carex vulpina.* *Fox carex.*

Spikelets aggregate in threes or fives, oblong, crowded, male above; *fruit* oval, compressed, 3-sided, divergent, apex 2-toothed; *bracteæ* setaceous; *culm* 3-sided, angles very acute, sides concave; *leaves* broad.

Gramen cyperoides palustre majus spica compacta, *Raii Syn.* 423, spic. 8.
Gramen palustre cyperoides, *Ger. em.* 21.
Gramen cyperoides palustre majus, *Park.* 1266.
Carex vulpina, *Lin. S. P.* 1382.

Bogs and river sides; perennial; May to July.

Root fibrous, matted; *leaves* broad, deep green, longer than the culm; *culm* upright, 2 feet high, leafy at bottom, thick near the spike, angles very rough; *spike* obtuse; partial spikes compact, sessile; *spikelets* sessile; *glumes* acute, brown, with the keel greenish.

β. *decomposita.* *Bracteæ* awned; *panicle* doubly branched.

γ. *aristata.* *Bracteæ* awned; *panicle* branched.

δ. *acuta.* *Bracteæ* acute; *panicle* branched.

10. *Carex intermedia.* *Intermediate carex.*

Spikelets alternate, crowded, the lowest rather distant; upper and lower spikelets female, middle spikelets male; *fruit* ovate, margined, apex 2-cut, angles ciliated and serrate; *culm* erect; *root* creeping.

Gramen cyperoides, q. Gramini cyperoidi ex monte Ballon simile, spica totali e pluribus spicis composita Plukenet, *Raii Syn.* 423, spic. 4.
Carex spicata, *Pollich Pal.* 878.
Carex disticha, *Hudson Fl. Ang.* 403.
Carex arenaria, *Leers Fl. Herb.* 195.
Carex intermedia, *Goodenough L. T.* 2, 154.

Bogs and watery places; perennial; May, June.

Root descending deep; *leaves* long; *culm* upright, 18 in. high, angles acute and rough; *spike* blunt, thick above, slightly compressed, never two-rowed; *spikelets* many, ovate, ferruginous; *glumes* acute, brown with a pale rib.

11. *Carex arenaria.* *Sand carex.*

Spikelets alternate, crowded; upper spikelets male, the intermediate ones female or androgynous; lower spikelets female; *fruit* ovate, margined, apex two-cut, ciliated, serrate, curved; *leaves* rolled in at their edge; *root* creeping.

Gramen cyperoides, q. Gramini cyperoidi ex monte Ballon simile humilius, in maritimis et arenosis nascens Plukenet. *Raii Syn.* 423, spic. 5.
Carex arenaria, *Lin. S. P.* 1381.

Shores of the sea; perennial; June.

Root very long; *culm* 18 in. long, bent, naked; *leaves* in tufts; *sheaths* dry, brown; *spike* ovate, compressed, two-rowed; *upper spikelets* crowded; *bracteæ* lanceolate, scariose, the lower ones having a leafy point; *glumes* acute, yellowish, brown; *fruit* lanceolate, acute, winged, margin rough.

12. *Carex Witheringii.* *Withering's carex.*

Spikelets alternate, crowded, upper male, lower female, intermediate female or androgynous; *fruit* ovate, apex two-cut, margined, margin serrated, ciliated; *culm* upright; *leaves* channelled; *root* fibrous.

Carex arenaria 2. *Withering* 125.

Sands on the sea-shores; perennial; June.

Root not creeping; *culm* 5 in. high, naked, sheathed at the base; *leaves* slender, acute, channelled, not so long as the culm; *bracteæ* leafy, acute, slender, semi-amplexicaule; *spike* two-rowed, lanceolate; *spikelets* sessile, acute; *glume* lanceolate, yellow, with a green rib ending in an awn.

13. *Carex muricata.* *Thorn carex.*

Spikelets ovate; *upper spikelets* male, close; *fruit* diverging, horizontal, ovate, plano-convex, apex two-toothed, margined at the base, margin ciliated, serrated; *leaves* narrow; *root* fibrous.

Gramen cyperoides spicatum minus, *Raii Syn.* 424, spic. 9.
Carex muricata, *Lin. S. P.* 1382.
Carex canescens, *Leers Fl. Herb.* 712.
Carex spicata, *Hudson Fl. Ang.* 406.

Woods and moist meadows; perennial; May and June.

Culm upright, 18 in. high, 3-sided, sides flat, angles acute, rough; *leaves* narrow, keeled; *spike* branched, oblong, cylindrical, 6 to 8-parted; *spikelets* 8 or 10, roundish; *bracteæ* ovate, scariose, keeled, bristly at the end; *glume* ferruginous, with the margin and keel greenish.

β. *gracilis.* *Spike* slender, compound; *culm* rather mooth.

14. *Carex divisa.* *Divided carex.*

Spikelets mostly 6, ovate, upper male interrupted; *fruit* ovate, adpressed, apex 2-toothed, compressed; *bracteæ* leaflike erect, at the very bottom of the spike; *root* creeping.

Gramen cyperoides ex monte Ballon, spica divulsa, *Raii Syn.* 423, spic. 3.
Carex divisa, *Hudson Fl. Angl.* 405.

Bogs and near the sea; perennial; May, June.

Root thick, twisted; *culm* upright, weak, 2 feet high; *leaves* slender, upright, light green; *spike* ovate, branched, compressed; *spikelets* crowded irregularly; *bracteæ* leaflike, longer than the spike; *glumes* brown, mucronated, with a pale edge and keel.

β. *curta.* *Bracteæ* shorter than the spike.

15. *Carex ovalis.* *Oval carex.*

Spikelets mostly 6, roundish, elliptical, rather close; lower male, solitary; *fruit* ovate, margined, margin ciliated, serrated, apex with two short teeth; *glumes* lanceolate as long as the fruit; *culm* fistulous.

Gramen cyperoides spica e pluribus spicis brevibus mollibus composita, *Raii Syn.* 422, spic. 2.
Carex leporina, *Hudson Fl. Angl.* 404.
Carex ovalis, *Goodenough L. T.* 2, 148.

Bogs; perennial; June.

Culm upright, 2 feet high, 3-sided, leafy at the base; *leaves* deep green, flat, as long as the culm; *spikelets* 4 to 6, elliptical, reddish green; *bracteæ* leaflike, as long as the spike, falling off; *glume* acute, reddish; *keel* green.

16. *Carex elongata.* *Longspike carex.*

Spikelets 6 to 12, alternate, approximate, cylindrical, lower male, single; *fruit* ovate, pointed, nicked, ribbed, patulous; *glumes* ovate, obtuse, much shorter than the fruit.

Gramen cyperoides angustifolium spicis longis erectis, *C. Bauhin Pinax* 6.
Carex elongata, *Lin. S. P.* 1383.
Carex canescens, *Pollich Pal.* 881.
Carex multicaulis, *Ehr. Gram.* 88.
Carex multiceps, *Etr. de Flora*, 78.

Marshy places; perennial; June.

Roots in tufts; *culm* 2 feet high, naked above, apex drooping; *leaves* pale green, upright; *spike* hardly interrupted; *spikelets* 6 to 12, cylindrical, when ripe squarose, crowded above, remote below; *bracteæ* glumaceous, rib ending in a bristle; *glumes* brown red; *rib* green.

17. *Carex stellulata.* *Star carex.*

Spikelets mostly 4, rather remote; *fruit* ovate, pointed, diverging horizontally; apex 2-toothed; margin ciliated, serrated; *glumes* ovate, acute.

Gramen cyperoides spicatum minimum spica divulsa aculeata, *Raii Syn.* 424, spic. 12.
Carex muricata, *Hudson Fl. Ang.* 406.
Carex echinata, *Hoffm. Germ.* 326.
Carex stellulata, *Goodenough L. T.* 144.
Carex Leersii, *Willd. Prod.* 95.

Marshes; perennial; May and June.

Root fibrous, tufted; *culm* 12 in. high, bluntly 3-sided; *leaves* deep green, upright; *spikelets* 3 or 4, distant, short, roundish, when ripe squarose, stellate; *bracteæ* very long, leaflike; *glume* acute; *rib* broad, green.

β. *masculina.* *Upper spikelet* male.

18. *Carex curta.* *Short carex.*

Spikelets mostly 6, close, cylindrical; *fruit* upright, ovate, planoconvex, rather acute, apex undivided; *glumes* ovate, acute, shorter than the fruit.

Gramen cyperoides elegans spica composita molli, *Raii Syn.* 423, spic. 7.
Carex ericoides, *Hudson Fl. Ang.* 408.
Carex canescens, *Lightfoot*, 550.
Carex cinerea, *Pollich Pal.* 880.
Carex tenella, *Ehr. Gram.* 98.
Carex curta, *Goodenough L. T.* 2, 145.

Marshy places; perennial; June.

Root rather creeping; *culm* acutely 3-cornered, 18 in. high; *leaves* slender, upright, pale green; *spikelets* silvery white, ovate, upper ones opposite, lower rather remote; *glumes* skinny, tender, whitish green; *bracteæ* leaflike, slender, upper ovate, whitish, rib ending in an awn.

19. *Carex remota.* *Distant carex.*

Spikelets remote, solitary; *bracteæ* leaflike, much longer than the culm; *fruit* ovate, acute, rather compressed, apex slightly 2-cut, edge blunt; *culm* lax.

Gramen cyperoides angustifolium spicis parvis sessilibus in foliorum alis, *Raii Syn.* 424, spic. 11.
Carex remota, *Lin. S. P.* 1383.

Moist woods and shady ditch banks; perennial; May and June.

Root in thick tufts; *culm* slender, leafy, 2 feet high; *leaves* pale green, slender; *spike* very long, at length drooping; *spikelets* solitary, small, ovate, whitish, 3 or 4 lower ones

very distant, the rest closer, rather naked; *bracteæ* leaflike, spreading, amplexicaul; *glumes* acute, whitish, with a green rib; *fruit* longer than the glumes.

β. *axillaris.* *Bracteæ* as long as the spike.

Carex axillaris, *Lin. S. P.* 1382.

20. *Carex axillaris.* *Axillary carex.*

Lower spikelets 3 or 4 together, distant; *fruit* ovate, acute, compressed, as long as the glume; apex deeply 2-cut, margin ciliated, serrate; *lower bracteæ* very long, leaflike; *culm* stiff.

Carex axillaris, *Goodenough L. T.* 2, 158.

Bogs; perennial; May and June.

Culm upright, 3 feet high; *leaves* light green, slender; *lower spikelets* 3 to 5, aggregated; *upper spikelet* distant, solitary; *bracteæ* leaflike, slender, longer than the spike; *glume* ovate, acute, brownish with a green rib.

c. *Carices with spikes of different sexes.*

21. *Carex rigida.* *Stiff carex.*

Female spikes 3, elliptical, cylindrical, blunt; *fruit* subglobose, apex not notched; *glume* ovate, blunt; *bracteæ* sessile, rounded at bottom, membranous, eared; *culm* rough; *leaves* broad, stiff.

Carex saxatilis, *Fl. Dan.* 159.
Carex rigida, *Goodenough L. T.* 2, 193.

High mountains; perennial; May and June.

Root creeping; *culm* 5 in. high: *leaves* dark green, rather glaucous, shorter than the culm; *male spikes* 1 or 2 acute; *female spikes* 3; *glumes* black, blunt, half the length of the fruit.

β. *recurva.* *Beak* of the fruit bent back.

22. *Carex pulla.* *Russet carex.*

Female spikes 2 or 3, distant, elliptical; *fruit* elliptical, globose, beaked, apex 2-toothed: *glume* oblong, blunt, smaller than the fruit: *bracteæ* amplexicaul.

Carex fusca, *Schkuhr Carex*, 64.
Carex pulla, *Goodenough L. T.* 3, 78.

Alpine pastures; perennial; July.

Root creeping; *culm* 9 in. high; *leaves* slender, nearly upright; *male spike* terminal, lanceolate, upright; *female spikes* usually 2, upright, distant; *glume* lanceolate, obtuse, brown, edge thin and pale; *fruit* inflated, longer than the glume.

23. *Carex cæspitosa.* *Tuft carex.*

Female spikes cylindrical, blunt, mostly 3, distant, the lower with short footstalks; *fruit* ovate, obtuse, pierced at the top, edge not notched; *glume* small, oblong, blunt, edge white; *bracteæ* setaceous, leaflike, eared at the base; *culm* very acutely angled, flaccid; *leaves* narrow, long, flaccid.

Gramen cyperoides q. G. caryophylleum angustissimis foliis, spicis sessilibus brevioribus erectis non compactis, *Raii Syn.* 418. polyst. 6.
Carex cæspitosa, *Lin. S. P.* 1388.

Bogs and damp woods; perennial; May.

Root creeping; *culm* upright, 12 in. high; *leaves* light green, glaucous, soft, upright; *male spikes* 1 or 2, upright, oblong, 3-sided; *female* 2 or 3, cylindrical; *glume* black, shorter than the fruit; *bracteæ* eared, ears large, nearly confluent; *fruit* persistent.

24. *Carex stricta.* *Straightleaf carex.*

Female spikes mostly 3, distant, cylindrical, attenuated, the lowest with a very short footstalk; *fruit* ovate, acute, apex pierced; *glume* lanceolate, acute, small; *bracteæ* broad; *culm* stiff, acutely angled; *leaves* short, stiff.

Gramen cyperoides foliis caryophylleis, spicis erectis sessilibus e seminibus confertis compositis, *Raii Syn.* 418, polyst. 4.
Carex cæspitosa, *Huds. Fl. Ang.* 412.
Carex cæspitosa β, *Lightf. Fl. Sc.* 581.
Carex acuta α, *Leers Herb.* 204.
Carex stricta, *Goodenough L. T.* 2, 196.

Bogs; perenial; April.

Root creeping; *culm* 2 feet high, upright; *male spikes* 2, upright, 3-sided; *female* 3, sessile, cylindrical, acute; *glume* acute, shorter than the fruit; *bracteæ* leaflike, not eared at the base; *fruit* acute, apex not notched.

25. *Carex acuta.* *Sharp-pointed carex.*

Male spikes 2 or 3; *female* 4 or 5, with a short footstalk, rather drooping, cylindrical, distant; *fruit* oblong, beak very short, apex not notched but pierced; *glume* oblong, acute, as long as the fruit; *bracteæ* long, leafy; *culm* acute-angled, rough, lax; *leaves* lax.

Gramen cyperoides majus angustifolium, *Raii Syn.* 417, polyst. 2; *Ger. em.* 29; *Park.* 1265.
Carex acuta β, *Lin. S. P.* 1388.
Carex gracilis, *Curtis Fl. Lond.* 4, 62.
Carex acuta, *Goodenough, L. T.* 2, 203.

Watery places; perennial; May.

Root creeping; *culm* 2 feet, high; *leaves* narrow, pale green; *male spikes* 2 or 3, slender; *female* 3, slender, drooping at first, but afterwards upright; *glume* acute, nearly as long as the fruit.

β. *minor.* *Culm* not 2 inches high.

γ. *major.* *Male spikes* very large, numerous; *glumes* awned, longer than the fruit.

δ. *monstrosa.* *Stamens* exserted from the spathellules.

II. 33. TRASUS. *Sedge.*

Spathelle one, imbricate all round; *spathellules* 2, soldered at the edge, persisting, becoming cartilaginous; *stamens* 2 or 3; *style* 1; *stigmata* 3; *akenium* 3-sided, in the soldered capsuliform spathellules. — *Root* perennial, fibrous or creeping; *culm* 3-sided; *leaves* rough on the edge and keel, sheathing; *sheaths* whole; *bracteæ* sheathing or amplexicaul; *flowers* spiked; *spikes* many, generally unisexual, in the 1st and 2d species androgynous, male flowers above, few, mostly sessile; female flowers below, numerous, either sessile or with footstalks.

A synoptic view of the species.

1. *Spikes androgynous.*

Spike 1, 4 or 5-flowered; *fruit* reflected; *glumes* deciduous ..... *T. pauciflorus.* 1.
Spikes 3 to 5, female at top, upright when in flower, drooping when in fruit .... *T. atratus.* 2.

2. *Spikes of different sexes.*

a. *Bracteæ membranous; fruit downy.*

Male spikes footstalked, overtopping the female ..... *T. clandestinus.* 3.
Male spikes sessile, overtopped by the female ..... *T. digitatus.* 4.

b. *Bracteæ leaflike; fruit downy; spikes sessile, or with sheathed footstalks.*

Male spike 1; *female* 2 or 3;
bracteæ sheathing ..... *T. præcox.* 5.
Male spike 1; *female* 2 or 3; *glume* short;
bracteæ amplexicaul; *culm* upright. ..... *T. tomentosus.* 6.
Male spike 1; *female* 2 or 3; *glume* long;
bracteæ amplexicaul; *culm* lying down .. *T. piluliferus.* 7.
Male spikes 2; *female* 3, cylindrical, brown;
fruit hirsute; *plant* hairy. ..... *T. hirtus.* 8.
Male spikes 2; *female* 2, ovate, oblong, black;
fruit woolly; *plant* smooth ..... *T. filiformis.* 9.

c. *Bracteæ leaflike; fruit smooth; spikes sessile, or with a footstalk enclosed in a sheath.*

Bracteæ amplexicaul; *culm* acute-angled;
fruit inflated, beaked ..... *T. vesicarius.* 10.
Bracteæ amplexicaul; *culm* obtuse-angled;
fruit inflated, beaked ..... *T. ampullaceus.* 11.
Bracteæ sheathing; *culm* smooth;
fruit beaked, beaks recurved ..... *T. flavus.* 12.
Bracteæ sheathing; *culm* smooth;
fruit beaked, beaks straight ..... *T. Oederi.* 13.

d. *Bracteæ leaflike, sheathing; fruit smooth; spikes upright, upper ones sessile, lower footstalked exserted, male* 1.

Fruit beaked, 2-cut; *glume* 3-ribbed; *sheath* short;
culm smooth; *ligula* 0 ..... *T. extensus.* 14.
Fruit beaked, 2-toothed; *glume* 1-ribbed; *sheath* long;
culm smooth; *ligula* long, acute. ..... *T. Hostianus.* 15.
Fruit beaked, 2-toothed; *glume* 1-ribbed; *sheath* long;
culm rough; *ligula* 0. ..... *T. fulvus.* 16.
Fruit beaked, 2-cusped; *glume* 3-ribbed; *sheath* long;
culm smooth; *ligula* short, blunt. ..... *T. distans.* 17.
Fruit beaked, 2-lobed, 2-ribbed; *glume* 1-ribbed;
sheath long; *culm* smooth; *ligula* 0..... *T. binervis.* 18.
Fruit obtuse, not nicked; *root* creeping;
sheath long; *culm* smooth. ..... *T. paniceus.* 19.
Fruit beaked, scariose, not nicked; *root* fibrous;
sheath short; *culm* smooth ..... *T. depauperatus.* 20.

e. *Bracteæ leaflike, amplexicaul; spikes upright, upper ones sessile, lower footstalked, male* 2 *or* 3.

Glumes acute;
male spike 3-sided; *female* cylindrical .... *T. riparius.* 21.
Glume of the male flower blunt, of the female acute, awned; *spikes* cylindrical..... *T. paludosus.* 22.

f. *Bracteæ leaflike, sheathing; spikes drooping, upper ones sessile, lower footstalked, exserted, male* 1.

Fruit crowded, ovate, acute;
leaves broad ..... *T. pendulus.* 23.
Fruit lax, lanceolate, 3-sided, ribbed;
leaves narrower ..... *T. strigosus.* 24.

g. *Bracteæ leaflike, sheathing; fruit smooth; spikes footstalked, drooping.*

Female spike lax, filiform;
fruit ovate, beak long ..... *T. sylvaticus.* 25.
Female spike ovate;
fruit ovate, 3-sided, pointed, smooth .... *T. capillaris.* 26.
Female spike ovate;
fruit elliptic, compressed, beaked, edge rough. *T. ustulatus.* 27.

h. *Bracteæ leaflike, sheathing; spikes upright, footstalked, exserted.*

Fruit smooth ..... *T. lævigatus.* 28.
Fruit rough ..... *T. erectus.* 29.

i. *Bracteæ leaflike, amplexicaul; fruit smooth; spikes footstalked.*

Root creeping; *female spike* ovate;
fruit elliptical, compressed ..... *T. limosus.* 30.
Root creeping; *female spike* cylindrical;
fruit elliptical, 3-sided, roughish ..... *T. glaucus.* 31.
Root creeping; *female spike* lax, fewflowered;
fruit obovate, obtuse, smooth ..... *T. rariflorus.* 32.
Root fibrous; *spikes* manyflowered;
fruit 3-sided, furrowed, beaked ..... *T. chlorostachyos.* 33.
Root fibrous;
fruit elliptical, inflated, obtuse ..... *T. pallescens.* 34.

1. *Trasi with androgynous spikes.*

1. *Trasus pauciflorus.* *Fewflowered sedge.*

Spike androgynous, not branched, mostly 4 or 5-flowered; *male flower* terminal, mostly solitary; *fruit* lanceolate, round, reflexed; *glume* of the female flowers deciduous; *leaves* long, convolute; *upper sheaths* leafless.

Carex patula, *Hudson Fl. Ang.* 402, 657.
Carex leucoglochin, *Lin. Sup.* 413.
Carex pauciflora, *Lightfoot Fl. Scot.* 543.

Alpine bogs; perennial; June.

Root fibrous, in tufts; *culm* 5 in. high, smooth; *leaves* usually in pairs, only half as long as the culm; *spike* ovate, oblong, acute; *fruit* yellowish green, striated.

2. *Trasus atratus.* *Black sedge.*

Spikes androgynous, 3 to 5, on footstalks, crowded, terminal male in the lower part, fruitbearing, drooping; *fruit* subrotund, ovate, beak short, apex 2-toothed; *glumes* ovate, acute; *bracteæ* amplexicaul; *leaves* crowded.

Carex atrata, *Lin. S. P.* 1386.

Alpine pastures; perennial; June, July.

Culm upright, 2 feet high, angles smooth; *leaves* light green, broad, flat; *bracteæ* leaflike, spreading; *spikes* at first upright, afterwards drooping; *stamens* 2 or 3; *glumes* black; *fruit* yellow, ribless, smooth.

2. *Trasi with many spikes, of different sexes.*

a. *Bracteæ membranous, leaflike; terminal spike solitary, male; female spikes sessile; fruit hairy.*

3. *Trasus clandestinus.* *Concealed sedge.*

Male spike footstalked; *female* 2, usually 3-flowered, distant, nearly sessile, concealed in the bracteæ; *fruit* obovate, obtuse, hairy, apex not nicked; *leaves* channelled.

Carex prostrata, *Allioni Ped.* 2, 267.
Carex clandestina, *Goodenough L. T.* 2, 167.

On sunny rocks; perennial; May.

Culms in tufts, 2 in. high, upright, 3-sided; *leaves* upright, 3 times as long as the culm, dark green, edge very rough; *rachis* rough, hollowed out; *male spike* rather 3-sided, linear, manyflowered; *female spikes* 2 or 3, distant, fewflowered; *bracteæ* obtuse, brown, sheathing; *glumes* obtuse, dark brown.

4. *Trasus digitatus.* *Finger sedge.*

Male spike sessile; *females* 3, fingerlike, distant, footstalked, linear; *fruit* obovate, beaked, 3-sided, downy; *glumes* obovate, mucronate, as long as the fruit; *bracteæ* oblique, mucronate; *culm* compressed; *leaves* flat.

Carex digitata, *Lin. S. P.* 1384.

Woods in chalky soils; perennial; May.

Culm slender, obtusely 3-sided, 9 in. long, smooth; *leaves* light green, slender, flat; *male spike* oblong, acute; *females* 2 or 3, linear, 8-flowered, footstalked, from the same sheath as the male and overtopping it; *bracteæ* sheathing, scariose; *glumes* loose, truncated, reddish, with a green rib.

b. *Bracteæ leaflike, sheathing; spikes footstalked, enclosed in the sheath; fruit downy.*

5. *Trasus præcox.* *Early sedge.*

Female spikes 2, close, oblong; *fruit* subglobose, obtuse, 3-sided, downy; *glume* ovate, acute, as long as the fruit.

Gramen cyperoides vernum minimum, *Raii Syn.* 421, polyst. 17.
Gramen cyperoides spicatum, *Ger. em.* 22.
Gramen spicatum foliis caryophylleis, *Park.* 1160.
Carex montana, *Relhan Cant.* 353.
Carex saxatilis, *Huds. Fl. Ang.* 408.
Carex præcox, *Jacquin Austr.* 446.
Carex verna, *Villars Dauph.* 2, 204.
Carex filiformis, *Leers Herb.* 718.
Carex stolonifera, *Ehr. Gram.* 99.

Dry barren pastures, heaths; perennial; April.

Root stoloniferous; *culm* 3-sided, edges blunt, 6 in. high; *leaves* in tufts, short, light green, shining, recurved; *male spikes* thick, clubshape; *female spikes* with a short footstalk: *bracteæ* scariose, awned; *glume* ferruginous, edge not scariose but the same colour, rib greenish; *fruit* not notched at the apex.

c. *Bracteæ leaflike, amplexicaul; spikes all sessile: fruit downy.*

6. *Trasus tomentosus.* *Napped sedge.*

Female spikes 2, cylindrical, rather close; *fruit* roundish, napped; *glumes* ovate, acute, smaller than the fruit; *bracteæ* eared, amplexicaul.

Carex tomentosa, *Lin. Mant.* 123.
Carex sphærocarpa, *Ehr. Gram.* 89.

Fields; perennial; June.

Root creeping; *culm* 12 in. high, angles acute; *leaves* upright, shorter than the culm; *bracteæ* scarcely overtopping the culm, sheath very short or none; *male spike* lanceolate, blunt; *glume* lanceolate, brownish, rather pointed, rib green; *fruit* as long as the glume, closely napped; nap first white, afterwards yellow.

7. *Trasus piluliferus.* *Pill sedge.*

Female spikes 2 or 3, close, elliptical, roundish; *fruit* round, downy, beak short; *glumes* oblong, acute, longer than the fruit; *culm* lying down, serrulate.

Gramen cyperoides spicis brevibus congestis, folio molli, *Raii Syn.* 421, polyst. 19.
Gramen cyperoides tenuifolium, spicis ad summum caulem sessilibus globorum æmulis, *Raii Syn.* 422, polyst. 20.
Carex pilulifera, *Lin. S. P.* 1385.
Carex montana, *Lin. S. P.* 1385.
Carex filiformis, *Fl. Dan.* 1048.
Round-headed carex.

Fields and pastures; perennial; May and June.

Culm 9 in. long, acutely 3-sided, slender, weak; *leaves* upright, bent back at top, light green; *bracteæ* bristlelike, 3-sided; *male spikes* lanceolate, slender, acute; *female spikes* 2 or 3, cylindrical, conglomerate, spreading; *glumes* ovate, ferruginous, edge white, rib green; *fruit* green, apex not notched.

8. *Trasus hirtus.* *Rough sedge.*

Male spikes 2; *female* 3, oblong, distant; *lower* one shortly footstalked; *fruit* oblong, pointed, rough haired, apex 2-cusped; *glumes* oblong, rough haired, awned; awns very long; *leaves* and *sheaths* roughhaired.

Gramen cyperoides polystachium lanuginosum, *Raii Syn.* 418, polyst. 7.
Carex hirta, *Lin. S. P.* 1389.

Damp fields and marshes; perennial; May and June.

Root creeping widely; *culm* smooth, 2 feet high, upright, leafy; *leaves* upright, acute, downy on the upper face; *sheath* very roughly haired above; *bracteæ* leaflike, as long as the spike; *male spike* lanceolate; *glume* ovate, brown, hairy, rib yellowish; *glumes* of the female spike bald, longawned, rib-green; *fruit* ovate, ribbed.

β. *glaber.* *Bald, sheath* very slightly hairy; *fruit* roughhaired.

γ. *compositus.* *Male spikes* 3 or 4; *female* branched; spikelets 2 or 3, crowded, with a leaflike bractea at their bottom.

9. *Trasus filiformis.* *Thread sedge.*

Male spikes 2, very long; *female spikes* 2, ovate, oblong, distant, sessile; *fruit* elliptical, woolly, apex 2-forked; *glumes* oblong, lanceolate, shortawned, as long as the fruit; *leaves* grooved.

Carex filiformis, *Lin. S. P.* 1385.
Carex tomentosa, *Lightf. Scot.* 2, 552.
Carex hirta, *Fl. Dan.* 379.
Carex lasiocarpa, *Ehr. Gram.* 10.
Carex splendida, *Willdenow Prod.* 103.
Slender leafed carex.

Bogs; perennial; June.

Root creeping; *culm* upright, naked, 2 feet high, towards the top 3-sided; *leaves* upright, stiff, narrow, not keeled: *bracteæ* leaflike, overtopping the culm; *male spikes* distant, lanceolate; glumes black with a yellow rib; *female spikes* 1 or 2, distant, upright; glumes pointed, bald; *fruit* ribbed, blackish with strawcolour hairs.

β. *simplex.* *Male spike* 1.

d. *Bracteæ leaflike, amplexicaul; spikes sessile, male many, upright; fruit smooth.*

10. *Trasus vesicarius.* *Bladder sedge.*

Female spikes 2 or 3, footstalked, cylindrical; *fruit* oblong, inflated, beaked, apex 2-forked; *glume* lanceolate, smaller than the fruit; *bracteæ* long; *culm* acutely 3-sided; *leaves* broad.

Gramen cyperoides majus præcox, spicis turgidis teretibus flavescentibus, *Raii Syn.* 420, polyst. 14.
Carex vesicaria, α and γ, *Lin. S. P.* 1388.
Carex inflata, *Huds. Fl. Angl.* 412.

Bogs and watery places; perennial; May.

Root creeping; *culm* 2 feet high, upright; *leaves* upright, pale green, very long; *bracteæ* sheathless; *male spikes* 2 or 3, slender, acute, light brown; glumes ovate, lanceolate, pale, ferruginous; *female spikes* upright; glumes lanceolate, acute, green; *fruit* very smooth, loosely spreading.

11. *Trasus ampullaceus.* *Crewet sedge.*

Female spikes 2, cylindrical; *fruit* subglobose, inflated, beaked, apex 2-forked; *glumes* lanceolate, smaller than the fruit; *culm* obtuse-angled; *leaves* narrow, edge rough.

Gramen cyperoides polystachion majus, spicis teretibus erectis, *Raii Syn.* 419, polyst. 9.
Carex vesicaria, *Hudson Fl. Ang.* 413.
Carex rostrata, *Withering B. Ar. ed.* 2. 1059.
Carex ampullacea, *Goodenough L. T.* 2, 207.

Bogs and watery places; perennial; May.

Root creeping; *culm* upright, 2 feet high, 3-sided; angles bald below, rough above the lowest spike; *leaves* upright, slender, glaucous; *bracteæ* without sheaths, long, the lowest overtopping the culm; *male spikes* 2 or 3, close, very slender, pale brown; glumes obtuse, brown, rib yellow; *female spikes* 2 or 3, distant, cylindrical, obtuse; glumes acute; *fruit* very smooth, apex longbeaked, beak diverging at a right angle.

e. *Bracteæ leaflike, sheathing; spikes footstalked, enclosed in the sheaths, upright, male solitary; fruit smooth.*

12. *Trasus flavus.* *Yellow sedge.*

Female spikes 3, close, elliptical; *fruit* ovate, beaked, beaks bent back, 2-toothed; *glumes* ovate, lanceolate, shorter than the fruit; *culm* rather smooth.

Gramen cyperoides q. Gramen palustre echinatum, *Raii Syn.* 421, polyst. 18.
Gramen palustre echinatum, *Ger. em.* 17.
Gramen echinatum Germanicum, *Park.* 1187.
Carex flava, *Lin. S. P.* 1384.
Hedgehog grass.

Bogs; perennial; May and June.

Root creeping; *culm* upright, a foot high, 3-sided, leafy below; *leaves* pleasant green, upright, broadish, flat, longer than the culm; *bracteæ* much higher than the culm, the upper scarcely sheathing, the lower sheathing, and not much spread out; *male spike* 1 or 2, lanceolate, upright; *female spikes* 3, ovate roundish, the upper close, almost sessile, the lower rather distant, footstalk longer than the sheath; *glumes* ovate, yellow, edge white, rib green; *fruit* yellowish green, diverging every way.

β. *scaber.* *Culm* rough edged.

γ. *duplex.* *Male spikes* 2.

13. *Trasus Oederi.* *Oeder's sedge.*

Female spikes 4, roundish; *fruit* globose, beaked, beak rather straight, 2-toothed; *glume* ovate, lanceolate, longer than the fruit; *culm* smooth.

Carex extensa, *Withering?*
Carex Oederi, *Hoffm. Germ.* 214.
Carex flava β, *De Candolle Syn. Fl. Gall.* 1745.
Carex flava γ, *Willd. Sp. Pl.* 4, 268.

Moist sandy meadows; perennial; all the year.

Root fibrous, creeping, throwing up new culms all the year; *culm* 12 in. high, lying down; *leaves* slender, acute; *bracteæ* as long as the spike, at length reflexed; *male spike* slender; *female spike* ovate, conical, acute, crowded, the lower ones distant; *fruit* expanding, apex bluntish.

f. *Bracteæ leaflike, sheathing; spikes footstalked, the upper enclosed, the lower exserted, male* 1; *fruit smooth.*

14. *Trasus extensus.* *Long sedge.*

Female spikes 3, elliptical, roundish, rather close, bracteæ very long; *sheath* and *footstalks* very short; *fruit* elliptical, ribbed, apex 2-toothed; *glumes* ovate, pointed, smaller than the fruit; *culm* smooth; *leaves* slender.

Gramen cyperoides q. Cyperoides echinatum majus Petiver, *Raii Syn.* 421, polyst. 18.*
Carex extensa, *Goodenough, L. T.* 2, 175.

Sea-side; perennial; June.

Root fibrous; *culm* upright, 12 in. high, bluntly 3-sided; *leaves* recurved, slender, grooved; *bracteæ* very long, spreading, with very short, dilated sheaths; *male spike* single, nearly sessile, lanceolate; *female spikes* 2 or 3, close, upright, ovate; *glume* ovate, 3-ribbed, pointed, ferruginous, back green; *fruit* spreading, scarcely beaked, angles smooth.

β. *cylindraceus.* *Spike* long, cylindrical.

15. *Trasus Hostianus.* *Host's sedge.*

Female spikes 3, oblong, distant; *bracteæ* leaflike, long; *ligula* opposite to the leaves, long, acute; *sheaths* half the length of the footstalk; *fruit* 3-sided, beaked, beak 2-toothed, teeth acute; *culm* smooth, roundish; *glumes* obtuse.

Carex fulva, *Host Gram. Austr.* 77.
Carex Hostiana. *De Cand. Hort. Monsp.*

Mountains; perennial; June.

Culm rough and angular below the spikes, upright or bent, 2 feet high; *radical leaves* keeled, light green, edge rough; *bracteæ* not overtopping the culm, sheath ending in a membranous ligula; *male spikes* 1 or 2, slender, sessile, upright, cylindrical; glume rather blunt, chesnut brown;

edge white, scariose; rib yellow, ending below the tip; *female spikes* 3, distant, oblong, acute; glume ovate, lanceolate, acute, nearly as long as the fruit, keeled, rib yellowish, ending below the tip; edge white, scariose; *fruit* yellowish green, 3-sided, slightly striated, angles very smooth, beaks linear, slightly bent, apex 2-toothed, acute.

Communicated by Mr. G. Don, as found on the Mountain Clova, Angus-shire, in Scotland.

16. *Trasus fulvus.* *Tawney sedge.*

Female spikes ovate, oblong, distant; *bracteæ* upright; *sheath* half the length of the footstalk; *ligula* very short or 0; *glumes* ovate, blunt, larger than the fruit; *fruit* elliptical, beak upright, 2-toothed; *culm* serrulate.

Carex trigona, *Allioni Pedem.* 232, 5.
Carex flava 2, *Withering Bot. Arr.* 134.
Carex fulva, *Goodenough L. T.* 2, 177.

Bogs; perennial; June, July.

Root creeping; *culm* upright, a foot high, 3-sided, angles rough; *leaves* upright, slender, dark green, shorter than the culm; *bracteæ* upright, not overtopping the culm; *sheath* long, apex brownish; *ligula* extremely short; *male spike* linear, slender, upright; glume obtuse, brown, rib brownish, very faint; *female spikes* 2 or 3, upright; glume ovate, rib pale, ending below the tip; *fruit* green, longer than the glumes, upright, spreading, faintly ribbed, angles smooth, beak linear, 2-toothed.

17. *Trasus distans.* *Distant sedge.*

Female spikes 3, ovate, very distant; *bracteæ* upright; *sheaths* half the length of the footstalk; *ligula* opposite to the leaf, short, blunt; *glumes* ovate, pointed, nearly as long as the fruit; *fruit* acutely pointed, bicuspidate, acute-angled.

Gramen cyperoides spicis parvis longissime distantibus, *Raii Syn.* 420, polyst. 16.
Carex distans, *Lin. S. P.* 1387.

Bogs by the sea-side; perennial; June.

Culm smooth, 2 feet high, upright, bluntangled, weak; *leaves* broadish, short, flat, light green, sheath long; *ligula* opposite to the leaves, short, blunt, white; *male spike* thick, lanceolate, obtuse; glume ferruginous, pointed, rib broad; *glumes* of the female spike broad, ovate, pointed; ribs three, closing at the apex; *fruit* longer than the glumes, brown, nearly 3-sided, many ribbed, edges raised, smooth, 2-cut, beaks short, diverging.

18. *Trasus binervis.* *Two-ribbed sedge.*

Female spikes 3, cylindrical, distant; *bracteæ* long, very slender, sheaths long; *glumes* obtuse, pointed, smaller than the fruit; *fruit* elliptical, 2-ribbed, apex 2-lobed, hyaline.

Carex distans, *Lightfoot Fl. Sc.* 561.
Carex binervis, *Smith L. T.* 5, 268.

Dry heaths; perennial; June.

Culm upright, 2 feet high, deep glaucous green, smooth, angles blunt; *leaves* broad, glaucous; *bracteæ* distant, like the leaves; *male spike* thin; glume elliptical, blunt, blackish, slightly pointed, rib green; *female spikes* 3 to 5, cylindrical, upright, lower very distant; glumes acute, blackish, smooth, pointed, rib green; *fruit* reddish brown, scarcely beaked, ribs green.

β. *ramosus.* *Lower female spike* branched.

γ. *androgynus.* *Female spikes* with a few male flowrets above.

19. *Trasus paniceus.* *Bread sedge.*

Female spikes 2 or 3, cylindrical, rather distant; *sheaths* long; *glumes* ovate, smaller than the fruit; *fruit* ovate, blunt, apex not notched; *culm* smooth.

Gramen cyperoides foliis caryophylleis, spicis e rarioribus et tumidioribus granis compositis, *Raii Syn.* 418, polyst. 3.
Carex panicea, *Lin. Sp.* 1387.

Damp meadows and pastures; perennial; May and June.

Root creeping; *culm* weak, a foot high, angles blunt, sides rounded; *bracteæ* much shorter than the culm; *male spike* 1, bellied, acute; *female spikes* 2 or 3, distant, cylindrical; *glumes* long, ovate, acute, rib green; *fruit* inflated.

β. *Lœrsii.* *Female spike* roundish, footstalk very long.

γ. *androgynus.* *Female spike* having a few male flowers at the tip.

δ. *distachyos.* *Male spikes* two.

20. *Trasus depauperatus.* *Starved sedge.*

Female spikes 2, 3 to 5-flowered, distant; *sheaths* short; *glumes* oblong; *fruit* longer than the glumes, obovate, inflated, beaked, apex oblique.

Carex ventricosa, *Curtis Fl. Lond.* 6, 68.
Carex depauperata, *Goodenough L. T.* 2, 181.
Carex triflora, *Willd. Phytogr.* 1, 2.

Woods; perennial; May, June.

Culm 18 in. high, upright; *leaves* with long sheaths, pale green; *bracteæ* very like the leaves, sheaths shorter; *male spike* terminal, linear; glumes obtuse, ferruginous, rib green; *female spikes* 3 to 5, distant, loose, erect, 2 to 5-flowered; *fruit* ovate, 3-sided, ribbed, longbeaked, apex scariose, not notched.

g. Bracteæ leaflike, amplexicaul; spikes upright, upper sessile, lower footstalked, male 2 or 3; fruit smooth.

21. *Trasus riparius.* *Bankside sedge.*

Male spikes 3-sided; *female spikes* 3, cylindrical, narrow at top; *glumes* as long and broad as the fruit, ovate, acute, awned; *fruit* oval, manyribbed, beak 2-forked.

Gramen cyperoides cum paniculis nigris, *Raii Syn.* 417, polyst. 1.
Carex acuta *α*, *Huds. Fl. Ang.* 413.
Carex riparia, *Curtis Fl. Lond.* 281.
Great common cyperus grass.

Banks of rivers; perennial; April, May.

Root creeping; *herb* blackish green, rather glaucous; *culm* acute-angled, 3 feet high, firm, upright; *leaves* in tufts, broad, long; *bracteæ* very long, sheaths scarcely any, ears rounded, pale; *male spikes* 3 or 5, close, upright, 3-sided; *female spikes* 3 or 4, cylindrical, thick, footstalks long, lower sometimes hanging down; *glumes* awned; *fruit* brown, spreading, beak very short.

22. *Trasus paludosus.* *Bog sedge.*

Male spikes 2 or 3, bellied; glumes blunt; *female spikes* 3, cylindrical, narrowed; *glumes* lanceolate, awned; *fruit* ovate, ribbed, as long as the glume, beak 2-toothed.

Gramen cyperoides minus angustifolium, *Park.* 1266, *Raii Syn.* 418, polyst. 2.*
Carex acuta, *Curtis Fl. Lond.* 4, 61.
Carex rufa, *Lamarcke Enc. Meth.* 3, 394.
Carex paludosa, *Goodenough L. T.* 2, 202.
Carex acutiformis, *Ehr. Gram.* 2, 30.
Small common cyperus grass.

River sides; perennial; May.

Root creeping; *culm* 2 feet high, upright, angles acute; *leaves* very long, glaucous, upright; *bracteæ* longer than the culm; *male spikes* 3 or 4, brownish black, glumes ovate, blunt, rib green; *female spikes* slender, blunt; footstalks short; glumes lanceolate, acute; *fruit* ovate, brown.

h. *Bracteæ leaflike, sheathing; spikes drooping when ripe, sessile, lower footstalked, exserted, male* 1; *fruit smooth.*

23. *Trasus pendulus.* *Drooping sedge.*

Female spikes 3 or 5, cylindrical, very long; *sheaths* long; *glumes* ovate, as long as the fruit, awns very short; *fruit* elliptical, crowded; beak short, 2-toothed; *leaves* broad, stiff.

Gramen cyperoides spicâ pendulâ longiora, *Park.* 1267; *Raii Syn.* 420, polyst. 13.
Carex maxima, *Scop. Carn.* 2, 229.
Carex agastachys, *Lin. Suppl.* 414.
Carex pendula, *Huds. Fl. Ang.* 411.

Damp woods and hedges; perennial; May and June.

Culm 6 feet high, firm, 3-sided; *leaves* broad, dark green, stiff, hard, glaucous beneath; *bracteæ* drooping, lower very long, sheaths as long as the footstalks; *spikes* 5 to 7, drooping, cylindrical, very compact, uppermost male, others female; *glumes* lanceolate, acuminated, brown, rib green; *fruit* smooth.

β. *androgynus.* *Male spike* with female flowrets at the upper part.

24. *Trasus strigosus.* *Harsh sedge.*

Female spikes 3 or 4, threadlike, lax, distant; *sheaths* long; *glume* ovate, lanceolate; *fruit* longer than the glume, oblong, lanceolate, ribbed, apex obliquely cut off; *leaves* slender.

Gramen cyperoides polystachium majusculum latifolium, spicis multis longis strigosis, *Raii Syn.* 419, polyst. 11.
Carex leptostachys, *Lin. Suppl.* 414.
Carex strigosa, *Huds. Fl. Angl.* 411.

Wood and hedges; perennial; April and May.

Culm upright, 2 feet high, smooth, slender; *leaves* broad, light green, thin; *bracteæ* long, sheaths nearly the length of the footstalk; *ligula* membranous, brown, amplexicaul; *spikes* 6 or 8, drooping, loose, uppermost male, others female; *fruit* green.

i. *Bracteæ leaflike, sheathing; spikes drooping, footstalked, all exserted; fruit smooth.*

25. *Trasus sylvaticus.* *Wood sedge.*

Female spikes 4, distant, long, threadlike; *bracteæ* sheathing, half as long as the footstalks; *glume* ovate, mem-

branous, awned; *fruit* as long as the glumes, loose, ovate; *beak* 2-cut.

Gramen cyperoides sylvarum tenuius spicatum, *Raii Syn.* 419, polyst. 10; *Park.* 1171.
Carex vesicaria β, *Lin. S. P.* 1389.
Carex capillaris, *Leers Herb.* 202.
Carex patula, *Pollich* 2, 597.
Carex Drymeia, *Linn. Suppl.* 414.
Carex sylvatica, *Huds. Fl. Ang.* 411.

Woods; perennial; May and June.

Culm 3 feet high, upright, leafy, 3-sided, sides convex; *leaves* roughish, light green; *bracteæ* longsheathed; *spikes* 6 or 8, slender, loose, male 1 or 2; *glumes* ovate, acute, whitish, rib green; *fruit* longbeaked.

26. *Trasus capillaris.* *Hair sedge.*

Female spikes 3, ovate, loose, about 12-flowered; *sheaths* half as long as the footstalk; *glumes* ovate, shorter than the fruit, hyaline, deciduous; *fruit* elliptical.

Carex capillaris, *Lin. S. P.* 1386.

Alpine mountains; perennial; July and August.

Culm upright, naked; *leaves* short, narrow; *bracteæ* upright, terminal; *footstalks* 3 or 4, nearly umbellate, afterwards, by the growth of the rachis, distant; *male spike* upright, linear, silvery-brown, about 10-flowered; *female spikes* drooping, short; *glumes* brown, tip white; *fruit* brown, smooth.

27. *Trasus ustulatus.* *Burnt sedge.*

Female spikes 2, ovate; *glumes* elliptical, shorter than the fruit; *bracteæ* sheathing, very short; *fruit* ovate, pointed, 2-toothed, compressed, edge rough.

Carex atrofusca, *Schcuchzer Carex*, 106.
Carex ustulata, *Wahl. Act. Holm.* 1803, 156.

Moist micaceous mountains; perennial; July.

Root tufted, scarcely creeping; *culm* almost naked, smooth, 6 in. high; *leaves* short, erect, striated, smooth; *spike* dark blackish brown, tumid, short; male upright.

28. *Trasus lævigatus.* *Smooth sedge.*

Female spikes 3, cylindrical, slender, distant; *glumes* oblong, ovate, nearly as long as the fruit, awned; *fruit* ovate, pointed; beaks 2, deeply cut, spreading; *sheaths* of the bracteæ very long.

Carex lævigata, *Smith L. T.* 3, 272.
Carex helodes, *Link in Schrad. Diar. Bot.* 1799, 303.

Marshes; perennial; May.

Root fibrous; *culm* 4 feet high, smooth; *leaves* upright, broad, light green, smooth, very long sheathed; *bracteæ* erect, overtopping the culm, pointed, upper with short sheaths or none; *spikes* cylindrical, long, acute; male usually 2, females with long footstalks; *fruit* longer than the glumes, ribbed, green, smooth; *seed* 1, filling the fruit, 3-sided.

29. *Trasus erectus.* *Upright sedge.*

Female spikes 3, distant, threadlike, upright; *sheaths* short; *glumes* ovate, shorter than the fruit, submucronate; *fruit* ovate, inflated, 3-sided, edge slightly hispid, apex membranous, 2-lobed.

Carex Mielichoferi, *Willd S. P.* 4, 276.
Carex Scopolii α, *Gaud. Agr. Helv.* 2, 168.
Carex erecta, *De Cand. Syn. Fl. Gall.* 1741.

Alpine rocks; perennial; August.

Root creeping; *culm* 1 foot high, angles obtuse; *leaves* very long, smooth, outer leaves broader and shorter; *lower sheaths* brownish, often leafless; *male spike* slender, ferruginous, glumes obtuse, mucronate, brownish, rib broad, pale; *female spikes* 2 or 3, round, upright; *sheaths* of the bracteæ one third the length of the peduncle; *glumes* lax, rib green; *fruit* green, apex purple, 2-lobed.

30. *Trasus limosus.* *Mud sedge.*

Female spikes 2, ovate; *glumes* ovate, as long as the fruit, mucronate; *fruit* elliptical, compressed, 3-sided; beak very short, apex not nicked; *root* creeping.

Carex limosa, *Lin. S. P.* 1386.
Green and gold carex.

Turf bogs; perennial; June.

Root shootbearing; *herb* rather sea-green; *culm* 1 foot high; *leaves* linear, shorter than the culm, sheathed at bottom with brown scales; *bracteæ* upright, brown, edge whitish; *male spike* upright, shining reddish brown; *female spikes* many flowered, compact; *fruit* green, golden brown on the edge; rarely flowering.

31. *Trasus glaucus.* *Seagreen sedge.*

Female spikes 2, cylindrical, distant; *bracteæ* eared; *glumes* blunt; *fruit* elliptical, roughish; apex very blunt; *culm* roundish; *root* creeping.

Gramen cyperoides, foliis caryophylleis, spicis oblongis e pediculis longioribus pendulis, *Raii Syn.* 418, polyst. 5.
Carex limosa β, *Leers Herb.* 201.
Carex glauca, *Scop. Carn.* 2, 223.
Carex recurva, *Huds. Fl. Ang.* 413.

Moist grass lands and woods; perennial; May, June.

Root creeping; *herb* sea-green; *culm* 1 foot high, sides convex; *leaves* upright, shorter than the culm, broadish; *bracteæ* upright, equalling the culm in height; *male spike* linear, lanceolate; *female spikes* cylindrical; *glumes* ovate, blackish, edge whitish, rib yellowish; *fruit* bluntly 3-sided, almost ribless, brownish green, turning black.

β. *Micheliana.* *Male spikes* many; *fruit* smooth.
Carex Micheliana, *Smith L. T.* 5, 270.

γ. *ramosa.* *Spikes* branched.

32. *Trasus rariflorus.* *Fewflowered sedge.*

Female spike loose, fewflowered; *glumes* ovate, acute; *fruit* obovate, obtusely 3-sided; *root* creeping.

Carex rariflora, *Eng. Bot.* 35, 2516.
Carex limosa rariflora, *Wahlen. Act. Holm.* 1803, 163.

Alpine mountains; perennial; July.

Culm a foot high; *glumes* black.

33. *Trasus chlorostachyos.* *Greenspike sedge.*

Female spikes 4, cylindrical, manyflowered; *glume* as long as the fruit; *fruit* ovate, lanceolate, furrowed, 2-cusped, spreading; *root* fibrous.

Gramen cyperoides, spica pendula breviore, *Raii Syn.* 419, polyst. 12.
Pseudo-cyperus, *Ger. em.* 29.
Cyperus seu Pseudo-cyperus spica brevi pendula, *Park.* 1266.
Carex Pseudo-cyperus, *Lin. S. P.* 1387.
Bastard cyperus.

Moist woods and river-banks; perennial; June.

Culm a foot high, upright, leafy, acute-angled; *leaves* pale green, sheathing; *peduncles* very long; *spikes* cylindrical, manyflowered, compact; *male spikes* upright, reddish; *female spikes* drooping, greenish; *glumes* awned; awns very long, very rough.

β. *bipedunculatus.* *Peduncles* in pairs from the same sheath.

34. *Trasus pallescens.* *Pale sedge.*

Female spikes 2 or 3, elliptical; *glumes* as long as the fruit, ovate, acute; *fruit* elliptical, inflated, obtuse; *root* fibrous; *leaves* pale.

Gramen cyperoides polystachium flavicans, spicis brevibus prope summitatem caulis, *Raii Syn.* 419, polyst. 8.
Carex pallescens, *Lin. S. P.* 1386.

Grass lands and moist woods; perennial; May and June.

Culm 18 inches high, leafy at bottom; *leaves* yellowish; *bracteæ* much overtopping the culm; *male spike* lanceolate, upright, pale, ferruginous; *glumes* ovate, yellowish, rib green; *fruit* pale green.

III. 34. COBRESIA. Willdenow. *Cobresia.*

Spathelles imbricate all round; *spathellule* 1, persisting, cartilaginous, involving the ovary; *stamens* 3; *stigmata* 3, downy; *style* dilated at the base, jointed; *akenium* horny, smooth, crowned with the persistent base of the style, enclosed in the persisting hardened glumule.—*Root* perennial, tufted; *leaves* linear, channelled, edge and keel rough; *culm* round, naked above, angular; *spike* compound, monoicous; *bracteæ* glumaceous, the lower one sometimes leaflike.

Cobresia caricina. *Carexlike Cobresia.*

Spike contracted, subovate; *spikelets* 3 or 4, alternate, imbricate, upper one male.

Carex hybrida, *Schkuhr Car.* 161.
Kobresia caricina, *Willd. S. P.* 4, 205.
Cobresia caricina, *Persoon Syn.* 534.
Carex bipartita, *Allioni Ped.* 2301.
Schœnus monoicus, *Eng. Bot.* 20, 1410.

Subalpine mountains; perennial; July.

Root scaly; *leaves* recurved, narrow; *culm* erect, single, 9 in. high; *spike* erect; *bracteæ* ovate, membranaceous, brown; *glumes* brown, edge white.

B. CYPERACEÆ. *Glumes* 2-rowed; *flowers* hermaphrodite; *glumelles* none or bristlelike.

IV. 35. CYPERUS. Theophrastus. *Cyperus.*

Spathelle 1, 2-rowed, keeled, all flowerbearing, equal; *glumelle* 0; *stamens* 3; *style* not jointed to the ovary, deciduous; *stigmata* 3; *akenium* oblong, 3-sided.—*Root* creeping; *culm* 3-sided, base leafy; *leaves* linear, keeled, edge

rough; *sheath* truncated, brown; *bracteæ* 3 or 6, leaflike; *bracteolæ* 2 or 4, bristlelike; *spikelet* 2-rowed, hermaphrodite, umbelled; *umbels* compound.

Cyperus longus. *Long cyperus.*

Culm leafy; *umbels* subcorymbose; *involucrum* 3 or 4-leaved, unequal; *radii* unequal, very long, naked; *involucellum* setaceous; *spikelets* linear, alternate, distant, flat.

Cyperus longus, *Raii Syn.* 425, 1; *Ger. em.* 30; *Lin. S. P.* 67.
Cyperus longus odoratus, *Park.* 146.
Sweet cyperus. English Galingale.

Bogs; perennial; July to September.

Root very long, brown; *culm* smooth, erect, slender, 2 or 3 feet high, base leafy; *leaves* very long, light green; *sheath* short, pale, scariose; *umbels* 6 in. high; *spikelet* 10 or 12-flowered; *involucellum* white; *glume* oblong; apex nicked; edge pale, scariose; keel green, smooth.

Root diuretic, emmenagogue, tonic; also sweet-scented, the scent improving by being kept in powder.

V. 36. CLADIUM. Schrader. *Pricklerush.*

Spathelle 1, imbricate, 1-flowered, outer smaller and empty; *glumelles* none; *stamens* 2; *style* not jointed; *stigmata* 2, 3, or 4; *drupe* long, rather 3-sided; *putamen* brittle, thin; *nut* long, elliptical, rather 4-furrowed, upper part naked, nucleus white. — *Root* creeping, fistulous, round, branchy, tumid and knobby at the bottom; *leaves* flat, linear, edge and ridge prickly, sheath short; *ligula* none; *corymbus* terminal or axillary; *spikelets* 2 or 3-flowered.

Cladium Germanicum. *German Pricklerush.*

Culm round; *corymbus* crowded; *spikelet* fascicled.

Cyperus longus inodorus sylvestris, *Ger. em.* 29; *Raii Syn.* 426, 4.
Cyperus longus inodorus vulgaris, *Park.* 1263.
Pseudo-cyperus palustris, *Micheli N. P. G.* 55.
Schœnus Mariscus, *Lin. S. P.* 62.
Cladium Germanicum, *Schrader Germ.* 75.
Prickly bogrush.

Marshes, especially saline; perennial; July and August.

Leaves dry, very long; *sheaths* very smooth; *corymbi* in pairs; *peduncles* long; *bracteæ* ovate; *spikelet* shining, 2-flowered, ovate, crowded; *glumes* light brown, obtuse; *drupe* red, shining.

VI. 37. CHÆTOSPORA. R. Brown. *Marshrush.*

Spathelle 1, imbricate, 1 or 2 outer smaller, empty; *glumelles* setaceous; *setæ* 6, shorter than the glumes; *stamens* 2 or 3; *style* deciduous, not jointed; *stigmata* 2, revolute; *akenium* lenticular, 3-sided.—*Root* creeping; *culm* roundish, base leafy; *leaves* flat, or half-round, channelled, edge smooth, ridge 0; *ligula* short; *spike* terminal, upright, 2-rowed, compressed, compound; *spikelet* alternate, sessile, 2 or many-flowered; *rachis* flexuose.

1. *Chætospora compressa.* *Compressed marshrush.*

Culm roundish; *leaves* flat; *bracteæ* leaflike, acute, longer than the spike; *spikelets* manyflowered.

Gramen cyperoides spica simplici compressa disticha, *Raii Syn.* 425; spic. 14.
Cyperella, § 2, *Micheli N. P. G.* 53.
Carex uliginosa, *Lin. S. P.* 65.
Scirpus caricis, *Retz Prod.* 64.
Scirpus compressus, *Persoon Syn.* 1, 66.
Scirpus caricinus, *Schrad. Germ.* 1, 132.

Turfy bogs; perennial; July.

Root shootbearing; *culm* rather 3-sided, 9 in. high, upright; *leaves* not channelled, smooth; *ligula* truncate; *spike* brown, shining; *lower bracteæ* 3, slender, leaflike; upper ovate, scariose, mucronate; *spikelets* 6 to 12, the lower sometimes branched.

2. *Chætospora rufa.* *Red marshrush.*

Culm round; *leaves* half-round, channelled; *bracteæ* leaflike, obtuse, shorter than the spike; *spikelet* fewflowered.

Schœnus rufus, *Hudson Fl. Ang.* 15.
Schœnus brunnesis, *Solander's MSS.*
Schœni compressi varietas, *Lightf. Fl. Scot.* 1138.
Scirpus rufus, *Wahl. Lapp.* 15.

Bogs; perennial; July.

Root horizontal; *culm* 6 in. high; *leaves* dilated at bottom, membranous, sheathing, full as long as the culm; *spike* brown, shining; *spikelets* 5 or 6, branched; *bracteæ* sometimes wanting.

VII. 38. RHYNCHOSPORA. Vahl. *Beakrush.*

Spathelle 1, imbricate, lower smaller and empty; *glumelles* setaceous, setæ 8 or 10, denticulate, shorter than the glumes; *stamens* 2 or 3; *style* subulate, dilated at the bottom, persisting; *stigmata* 2 or 3; *akenium* bony, lenticular, conical, beaked.—*Root* perennial, fibrous, or creeping; *culm* slender, triangular, base slightly tumid; *leaves* linear,

channelled, edge and ridge rough; *sheaths* short; *ligula* 0, or very short; *spikelets* umbelled, axillary, or terminal, 2 or 3-flowered; *bracteæ* leaflike, longer than the spikelets.

1. *Rhynchospora alba.* *White beakrush.*

Culm rather acute-angled; *leaves* very slender, channelled; *spikelets* fascicled; *root* fibrous.

Cyperus minor palustris hirsutus, paniculis albis paleaceis, *Raii Syn.* 427, 6.
Gramen junceum leucanthemum, *Ger. em.* 30.
Cyperella § 1. No. 1. *Micheli N. P. G.* 53.
Schœnus albus, *Lin. S. P.* 65.
Schœnus setaceus, *Thuil. Fl. Par.* 19.
Rhynchospora alba, *Vahl Enum.* 2, 236.

Bogs; perennial; July and August.

Culm fascicled, in tufts, 12 in. high; *leaves* shorter than the culm, erect; *sheath* 3-sided, white; *ligula* very short; *spikelet* oblong, erect, white, turning brownish; *akenium* compressed, acute, white; *stigmata* shorter than the style.

2. *Rhynchospora fusca.* *Brown beakrush.*

Culm blunt-angled; *leaves* bristlelike, channelled; *spikelets* fascicled; *root* creeping.

Cyperus minor angustifolia palustris capitulis fuscis paleaceis, *Raii Syn.* 427, 6.*
Cyperella § 1, No. 2, *Micheli N. P. G.* 53.
Schœnus fuscus, *Lin. S. P.* 1664.
Schœnus albus β, *Hudson Fl. Ang.* 16.
Rhynchospora alba ε, *Vahl Enum.* 2, 236.
Schœnus setaceus, *Thuil. Fl. Paris*, 19.
Rhynchospora fusca, *Rœmer Syst. Veg.* 88.

Turf bogs; perennial; August.

Root hard, throwing up a single culm here and there; *culm* almost naked, slender; *leaves* very slender; *sheath* round; *ligula* 0; *spikelet* 3 or 4-flowered, oblong, brown, acute; *akenium* roundish, palebrown, shining; *stigmata* longer than the style.

VIII. 39. SCHŒNUS. Theophrastus. *Bogrush.*

Spathelle 1, imbricate, 3 or 6 outer small, crowded and empty, flowerbearing 3 or 4, alternate; *rachis* flexuose; *glumelles* bristlelike, bristles 3 to 6, smooth, shorter than the glumes; *stamens* 3; *style* deciduous, not jointed; *stigmate* 3; *akenium* 3-sided.—*Root* fibrous, perennial; *leaves* all radical, tufted, bristlelike, ridged, planoconvex, shorter than the culm; *sheaths* broad, slit lengthways, black, shining; *ligula* very short; *culm* round, not branched, apex thickened; *head* terminal, ovate; *spikelets* many; *involucrum* 2-valved, valves unequal.

1. *Schœnus nigricans.* *Black bogrush.*

Head ovate; *spikelets* many; *bracteæ* unequal, lower ending in an awlshape bristle longer than the head; *culm* round, smooth.

Scirpus q. Juncus lævis minor, panicula glomerata nigricante, *Raii Syn.* 430, 10.
Melanoschœnus palustris, *Micheli N. P. G.* 46.
Schœnus nigricans, *Lin. S. P.* 64.
Cyperus nigricans, *With.* 78.

Spongy bogs; perennial; May and June.

Culm erect, 18 in. high; *head* terminal, black, shining; *leaves* rather rough; *lower bracteæ* ovate; *stem* clasping, black, enclosing the spikelets, cartilaginous, shining, ribbed, opake, ridged, rib green, ending in an awlshape seta longer than the head; *upper bracteæ* small, similar to the lower, but the seta is very short, or even wanting; *spikelets* crowded, acute; *glumes* acute, keel rough; *seed* shining, white.

2. *Schœnus ferrugineus.* *Brown bogrush.*

Head linear; *spikelets* 2 or 3; *bracteæ* nearly equal; *bristle* scarcely longer than the head; *culm* round, smooth.

Schœnus ferrugineus, *Lin. S. P.* 64.

Mountain bogs; perennial; August.

Leaves slender, setaceous, very short, smooth; *sheath* brown, apex notched; *culm* slender, 8 in. high; *head* brownish, slender; *bracteolæ* at the base of each spike, ovate, 5-ribbed, back smooth; *bracteæ* nearly equal, setæ 4 or 5.

C. Scirpideæ. *Glumes* imbricate all round; *flowers* hermaphrodite; *glumelles* more or less bristlelike.

IX. 40. SCIRPUS. Tragus. *Rush.*

Spathelles 1, imbricate all round, all fertile; *spathellules* bristly, bristles 5 or 6, toothed, shorter than the glumes; *stamens* 2 or 3; *style* 1, not dilated at the bottom, jointed, deciduous; *stigmata* 2; *akenium* 3-sided.

a. Bœotherion. *Root fibrous, perennial; culm round, smooth, striated; leaves none; sheaths tubular, leafless; spikes solitary, terminal; bracteæ* 2, *glumaceous.*

1. *Scirpus cæspitosus.* *Turf rush.*

Spike ovate, 4 or 5-flowered; *bracteæ* nearly equal, as long as the spike; lower ending in a very short blunt mucro; *radical scales* many.

Scirpus montanus capitulo brevior, *Raii Syn.* 429, 9.
Scirpus §.
Scirpus cæspitosus, *Lin. S. P.* 72.
Deer's hair.

Turfy heaths; perennial; July.

Culm densely tufted, very smoothly streaked, stiff, 6 in. high; *sheaths* ending a short leaf; *lower bracteæ* 3 or 5-ribbed; mucro white, thick.

2. *Scirpus pauciflorus.* *Fewflowered rush.*

Spike ovate, 6 or 7-flowered; *bractea* unequal, shorter than the spike; *radical scales* very few.

Scirpus, § 5, No. 1, *Micheli N. P. G.* 51.
Scirpus Bœothryon, *Lin. Suppl.* 103.
Scirpus pauciflorus, *Lightfoot Scot.* 1078.
Scirpus Halleri, *Villars Delph.* 2, 188.

Hilly bogs; perennial; August.

Culms many, 6 in. high, upright; barren culms taller; *glumes* obtuse, and apex whitish.

3. *Scirpus campestris.* *Champaign rush.*

Spike linear, 3 or 4-flowered; *bracteæ* equal, as long as the spike; *radical scales* very few.

Scirpus campestris, *Roth Catal.* 1, 35.

Splashy fields; perennial; August.

Culm 4 in. high, upright; *spike* when flowering linear; when fruiting oblong; *bracteæ* as long, or 2 to 3 times longer than the spike.

4. *Scirpus multicaulis.* *Manystemmed rush.*

Spike ovate, manyflowered; *bracteæ* equal, not very short, obtuse; *radical scales* 0.

Scirpus equiseti capitulis crassioribus et habitioribus, humilis et multicaulis, *Rupp. Fl. Jen. a Hallero*, 319.
Scirpus palustris β, *Lin. Fl. Lapp.*
Scirpus palustris, *Ehr. Calam.* 61.
Scirpus multicaulis, *Smith Fl. Brit.* 48.
Scirpus multicaulis, equiseti capitulis minoribus, *Reliq. Rudbeck.* 28, 2.

Bogs; perennial; July.

Root thick; *culm* 9 in. high; *sheath* cylindrical; *spike* ferruginous; *glumes* equal, ovate, obtuse, blackish, edge and point membranaceous, rib green.

b. Scirpus. *Spikes many, terminal; culm round or 3-sided, naked; leaves none; root creeping; bracteæ 2 or 3, leaflike.*

5. *Scirpus lacustris.* *Lake rush.*

Culm round, elongated, smooth; *panicle* branched; *spikes* ovate; *lower bracteæ* long, upright; *upper bracteæ* short, horizontal.

Scirpus palustris altissimus, *Raii Syn.* 428, 1.
Juncus aquaticus maximus, *Ger. em.* 35.
Juncus lævis maximus, *Park.* 1191.
Scirpus § 1, No. 1, *Mich. N. P. G.* 49.
Scirpus lacustris, *Lin. S. P.* 72.
Bull rush.

Rivers and large pools; perennial; July.

Root horizontal; *culm* upright, 6 feet high, dark green, spongy; *sheaths* alternate, submembranaceous, brownish; *branches* of the panicle unequal; *bracteæ* 2, lanceolate, shorter than the panicle; *upper bracteæ* many, small, placed next the panicle; *spikelets* crowded, brownish; *glumes* keeled, edge fringed.

6. *Scirpus medius.* *Middling rush.*

Culm round, smooth, glaucous; *panicle* scarcely branched; *spike* ovate; *bracteæ* 3, lower erect, leaflike, 2 upper membranous, equal, prickly, as long as the panicle; *stigmata* 2.

Scirpus q. Juncus sive Scirpus medius C. Bauhin, *Raii Syn.* 428, 2.
Scirpus lævis vulgaris, *Park.* 1191.
Scirpus § 1, No. 2, *Mich. N. P. G.* 50.
Scirpus Tabernæmontani, *Gmel. Fl. Bud.* 1, 101.
Scirpus palustris β, *Smith Fl. Brit.* 52.
Scirpus glaucus, *Eng. Bot.* 33, 2321.
Less Bullrush.

Pure waters; perennial; July.

7. *Scirpus carinatus.* *Ridged rush.*

Culm below round, above 3-sided; *panicle* nearly simple; *spike* ovate; *bracteæ* prickly; *stigmata* 2; *sheaths* acute, leafless.

Scirpus q. Juncus aquaticus medius, caule carinato Doody, *Raii Syn.* 428, 3.
Scirpus lacustris γ, *Smith Fl. Brit.* 52.
Scirpus Davilis, *Hoppe in Strum. Germ.* 36.
Scirpus carinatus, *Engl. Bot.* 28, 1988.

Banks of rivers; perennial; August.

Upper bracteæ shorter than the panicle.

8. *Scirpus triqueter.* *Threesided rush.*

Culm 3-sided; *panicle* cymose; *spikes* sessile and pedunculed; *spikelets* ovate, crowded; *sheaths* ending in short leaves; *bractea* 1, leaflike, upright, longer than the spike.

Scirpus q. Juncus acutus maritimus, caule triquetro maximo molli, procerior nostras Plukeneti, *Raii Syn.* 428, 4.
Scirpus mucronatus β, *Huds. Fl. Ang.* 20.
Scirpus triqueter α, *Smith Fl. Brit.* 55.
Scirpus triqueter, *Withering. Bot. Arr.* 76.

Sea-shore and river-banks; perennial; August.

Root yellow; *culm* single or tufted, 4 feet high, upright, pale green, angles acute; *bracteolæ* short, membranaceous; *spikelets* 3 or 5; *glumes* ovate, edge ciliated, apex blunt mucronated; *apex* of the anther cuspidate, small, white, diaphanous; *akenium* obovate, edge rounded, very smooth.

β. *foliaceus*. *Sheaths* ending in a short leaf.

9. *Scirpus pungens*. *Prickly rush.*

Culm 3-sided; *spikes* glomerate, sessile; *glumes* ovate, rounded, apex 2-cut; *anther* aristated; *sheath* ending in short leaves; *bractea* 1, upright, longer than the panicle.

Scirpus q. Juncus acutus maritimus caule triquetro, rigido, mucrone pungente Plukenet, *Raii Syn.* 429, 5.
Juncus acutus maritimus caule triangulo, *Park.* 1196.
Scirpus mucronatus, *Wither. Bot. Arr.* 2, 50.
Scirpus mucronatus α, *Huds. Fl. Angl.* 20.
Scirpus triqueter β, *Smith Fl. Brit.* 1, 55.
Scirpus Rothii, *Hoppe Deutschl. Fl.* 36, 4.

Sea-shore; perennial; August.

Culm slender, firm; *sheaths* all ending in leaves; *spikelets* 4 or 6, sessile; *bracteæ* 3 or 4 in. long; *glumes* chesnut colour, rounded, lobes acute, rib not prominent.

10. *Scirpus maritimus*. *Sea rush.*

Culm 3-sided, leafy; *panicle* cymose, simple, bracteate; *leaves* many, ridged; *bracteæ* 2 to 5, pungent; *glumes* mucronate.

Cyperus q. Gramen cyperoides palustris, panicula sparsa, Parkinson (1266), *Raii Syn.* 425, 2.
Gramen aquaticum cyperoides vulgatius, *Ger. em.* 22.
Scirpus maritimus, *Lin. S. P.* 74.
Scirpus cyperoides, *La Marcke Fl. Fr.* 3, 553.

Salt marshes; perennial; August.

Root creeping, scaly; *culm* upright, rigid, 3 feet high, angles acute; *leaves* channelled, pointed, upper largest; *sheaths* smooth; *panicle* cymose, branchy, spreading; *spike* sessile or peduncled; *bracteæ* unequal, pungent, lower longest.

β. *conglobatus*. *Panicle* simple, conglomerate; *spikes* all sessile; *bracteæ* mostly 2.

γ. *nodosus*. *Root* knobbed.

Cyperus rotundus littoreus inodorus, *Raii Syn.* 426, 3.
Cyperus rotundus littoreus, *Ger. em.* 31.
Cyperus rotundus littoreus inodorus Anglicus, *Park.* 1264.
Round-rooted bastard cyperus.

11. *Scirpus sylvaticus.* *Wood rush.*

Panicle very branched, corymbose, bracteate; *culm* 3-sided, leafy; *spikelets* crowded; *glumes* not nicked, mucronate; *bracteæ* 3, leaflike, unequal.

Cyperus gramineus, *Raii Syn.* 426, 5.
Cyperus gramineus miliaceus, *Ger. em.* 30.
Pseudocyperus miliaceus, *Park.* 1171.
Scirpus sylvaticus, *Lin. S. P.* 175.
Millet cyperus grass.

Damp woods; perennial; July.

Culm single, upright, 2 feet high, hollow at top, leafy; *leaves* broad, acute, shining; *sheaths* smooth; *ligula* small; *bracteæ* 2 or 4, lower longer than the panicle; upper small, loose, truncated; *spikelets* dark green.

X. 41. ELEOCHARIS. R. Brown. *Clubrush.*

Spathelle 1, all alike fertile; *glumelles* bristlelike, bristles 4, denticulate; *style* dilated at bottom, jointed to the ovary; *stigmata* 2 or 3; *akenium* lenticular, dilated at bottom, crowned with the hardened style.—*Root* annual, fibrous, or perennial, creeping, horizontal; *culm* simple, round or angular, smooth; *sheaths* truncated, leafless; *spike* 1, terminal, upright, naked; *glume* imbricate all round; *leaves* 0, except on the barren culms.

a. *Culm bristly, threadshape, angular; root fibrous.*

1. *Eleocharis acicularis.* *Needlelike clubrush.*

Culm 4-angled, bristly; *spike* ovate, acute; *bractea* half the length of the spike; *root* fibrous; *stigmata* 3.

Scirpus minimus capitulis equiseti, *Raii Syn.* 429, 8.
Scirpus acicularis, *Lin. S. P.* 71.
Cyperus acicularis, *With.* 78.
Eleocharis acicularis, *Rœmer Sys. Veg.* 154.

Wet heaths and bogs; perennial; August.

Root fibrous, in tufts; *culms* many; *sterile culms* long, recurved, obtuse, threadshape, smooth, knotty; *sheaths* very fine; *spikes* 5 to 11-flowered, turning black; *glumes* ovate, obtuse, rib green; *akenium* white, shining; *bristles* 4, falling off.

b. *Culm round; root creeping.*

2. *Eleocharis palustris.* *Marsh clubrush.*

Culm round; *spike* oblong; *glumes* lanceolate, acute; *root* creeping; *stigmata* 2; *bracteæ* very small.

Scirpus equiseti capitulo majori, *Raii Syn.* 429, 7.
Juncus aquaticus capitulis equiseti, *Park.* 1196.
Juncus minor capitulis equiseti, *Ger. em.* 34.
Scirpus palustris, *Lin. S. P.* 70.
Eleocharis palustris, *Rœmer Sys. Veg.* 151.
Bulbostylis palustris, *Steven Mem. Mosq.* 5, 355.

Rivers and ditches; perennial; June and July.

Root horizontal, stoloniferous; *culms* unequal, in tufts, very soft, spongy, thick; *sheaths* coloured; apex brown, obliquely truncated; *spike* ovate, cylindrical, neatly imbricate; *glumes* equal, brown, edge scariose, rib green; *akenium* yellow.

XI. 42. ISOLEPIS. R. Brown. *Smoothrush.*

Spathelles 1, all alike, fertile; *glumelles* none; *stamens* 3; *style* not jointed to the ovary, base simple, falling off; *stigmata* 2 or 3; *akenium* lenticular or 3-sided.—*Root* fibrous or creeping; *leaves* 0, except the barren round culms; *spikes* terminal, single; *spikelets* lateral, sessile or capitate, footstalked; *bracteæ* 2, glumaceous.

a. *Spike* 1, *terminal; bracteæ* 2-*valved.*

1. *Isolepis fluitans.* *Floating smoothrush.*

Culm branched; *barren culms* flaccid; *spike* fewflowered.

Scirpus equiseti capitulo minori, *Raii Syn.* 431, 12.
Scirpus fluitans, *Lin. S. P.* 71.
Isolepis fluitans, *R. Brown Prod.* 222.

Ditches and ponds; perennial; July, August.

Root fibrous; *culm* very long, floating, rooting at the joints; *spike* green, small; *stigmata* 2.

β. *stolonifera. Culm* channelled, leafy at the bottom; *spike* 2-flowered.

b. *Spikelets terminal, aggregated, capitate; bracteæ* 2, *leaflike.*

2. *Isolepis paniculata.* *Panicled smoothrush.*

Heads globose, sessile or footstalked; *bracteæ* unequal, the lower channelled, edge sawed, the upper shorter, bent down; *culm* round, naked, smooth.

Scirpus maritimus, capitulis rotundioribus glomeratis, *Raii Syn.* 429, 6.
Scirpioides § 1, No. 1, *Micheli N. P. G.* 52.
Scirpus Holoschœnus, *Lin. S. P.* 72.
Scirpus Holoschœnus α, *Smith Fl. Br.* 51.
Isolepis Holoschœnus, *Rœm. Sys. Veg.* 151.

Salt marshes; perennial; August to November.

Root horizontal, in tufts; *culms* many, sea-green, 3 feet high, stiff; *sheaths* 3 or 4, alternate brown, streaked, acute, apex ending in a short barren culm 2 or 3 in. long; *panicle* unequal, stiff, divaricating; *lower bractea* acute, upright, 6 in. long; *upper* green, short, divaricated; *heads* 5 to 8, verrucose; *spikelets* rounded; *stamens* 3.

β. *australis.* *Middle head* sessile, the rest footstalked; *culm* slender.

Juncus minor acutus maritimus prolifer, *Pluken. Phyt.* 40, 5.
Scirpioides § 2, No. 2, *Micheli N. P. G.* 52.
Scirpus australis, *Lin. S. P.* 72.
Scirpus Holoschœnus β, *Smith Fl. Br.* 53.

γ. *Romana.* *Head* all sessile; *culm* very slender.

Scirpioides § 3, No. 2, *Micheli N. P. G.* 52.
Scirpus Romanus, *Lin. S. P.* 72.
Scirpus Holoschœnus γ, *Smith Fl. Br.* 53.
Isolepis Holoschœnus romanus, *Rœm. S. V.* 151.

c. *Spike terminal, solitary or aggregate; bracteæ* 1 *or* 2-*leaved; akenium streaked longitudinally.*

3. *Isolepis setacea.* *Bristle smoothrush.*

Culm bristlelike, slender, unbranched; *spikes* 1 to 4, nearly sessile, horizontal; *bractea* 1, leaflike, long, upright, much shorter than the culm; *akenium* roundish.

Scirpus foliaceus humilis, *Raii Syn.* 430, 11.
Juncellus Lobellii, *Park.* 1192.
Gramen junceum maritimum exile Plimmostii, *Park.* 1270.
Scirpus § 2, No. 5, *Micheli N. P. G.* 50.
Scirpus setaceus, *Lin. S. P.* 73.
Isolepis setacea, *R. Brown Prod.* 222.
Plymouth rush. Small clubrush.

Wet sandy ground; annual; July and August.

Root fibrous, in tufts; *culms* many, 3 in. high, rather stiff; *sheaths* ending in a short, channelled, barren stem; *spike* apparently lateral, ovate, 1, 4, 6, or 12-flowered, variegated with white, green, and purple; *bracteæ* sheathing, dilated at bottom, edge scariose, concave; *akenium* obovate, very small.

XII. 43. TRICHOPHORUM. Persoon. *Hares-tail.*

Spathelle 1, imbricate, all round; *glumelles* bristlelike; *bristles* 6, woolly, crisp, smooth, longer than the glumes, becoming exserted; *stamens* 3; *style* 1, not dilated at bottom, jointed, falling off; *stigmata* 2 or 3; *akenium* ovate.—*Root* creeping, perennial, in tufts; *culm* angular, rough,

slender, leafy at bottom; *leaves* short, linear, obtuse, channelled; *sheaths* tubular; *scales* many; *spike* terminal, single, hermaphrodite or unisexual; *bracteæ* 2, unequal, glumaceous.

Trichophorum alpinum. *Alpine hares-tail.*

Culm 3 or 4 angular, angles rough; *bracteæ* shorter than the spike; *spike* few-flowered.

Linagrostis § 1, No. 3, *Micheli N. P. G.* 54.
Eriophorum alpinum, *Lin. S. P.* 77.
Trichophorum alpinum, *Persoon Syn.* 1, 70.

Turf bogs; perennial; April, May.

Culms erect, 9 in. high; *leaves* 1 in. long, blunt; *spike* ovate; *bracteæ* ovate; upper bractea mucronate; mucro short, blunt; lower bractea awnless.

XIII. 44. ERIOPHORUM. Theophrastus. *Cottongrass.*

Spathelle 1, imbricate, all fertile; *glumelles* bristly, bristles many, smooth, woollike, longer than the glumes, becoming exserted; *stamens* 3; *style* 1, not dilated at bottom, jointed, falling off; *stigmata* 2 or 3; *akenium* 3-sided, ovate.—*Root* creeping, mostly in tufts, perennial; *culms* round or angular, mostly smooth; *spike* manyflowered, hermaphrodite; *glumes* scarcely ribbed, very thin, scariose, dark, edge white.

a. *Spikes single, terminal; bracteæ 3 or 4, like the glumes.*

1. *Eriophorum capitatum.* *Headed cottongrass.*

Culm round; *sheaths* slightly inflated: *spike* subglobose; *anther* heartshape, ovate, short; *root* creeping.

Linagrostis § 1, No. 2, *Micheli N. P. G.* 54.
Eriophorum capitatum, *Hoff. Germ.* 3, 26.
Eriophorum Scheuchzeri, *Persoon Syn.* 1, 70.
Eriophorum vaginatum β, *Suter Fl. Helv.* 1, 28.
Eriophorum alpinum, *Villars Dauph.* 2, 184.

Marshy heaths; perennial; March.

Root long; *culms* few, thick, soft, deep green, sheathed below; *leaves* in bundles, bristlelike, awlshape, spongy, shorter than the culms.

2. *Eriophorum vaginatum.* *Sheathed cottongrass.*

Culms 3-sided; *sheaths* inflated above, bellied; *spike* oblong, ovate; *anthers* linear, long; *root* fibrous, in tufts.

Linagrostis q. Juncus Alpinus cum cauda leporina Joh. Bauhin, *Raii Syn.* 436, 2.
Gramen juncoides lanatum alterum Danicum, *Park.* 1271.
Gramen junceum montanum, subcærulea spica, Cambro-britannicum, *Park.* 1188.
Linagrostis, § 1, No. 1, *Micheli N. P. G.* 54.
Eriophorum vaginatum, *Lin. S. P.* 76.
Linagrostis vaginata, *La Marck Fl. Fr.* 555.
Eriophorum cæspitosum, *Schrader Germ.* 1, 150.
Harestail rush, Moss crops.

Turf bogs; perennial;

Roots in dense tufts; *culms* 1 foot high, hard, slender, angles black and smooth; *sheaths* long, tubular, leafless, brown above, inflated, reticulate; *leaves* upright, 3-sided, shorter than the culms.

b. *Spike many peduncled, paniculate; bracteæ 2, leaflike, unequal.*

3. *Eriophorum latifolium.* *Broadleaved cottongrass.*

Culms roundish; *leaves* flat; *spike* drooping; *peduncles* rough.

Linagrostis, § 2, No. 1, *Micheli N. P. G.* 54.
Eriophorum polystachyon, *Lin. S. P.* 76.
Linagrostis paniculata α, *La Marck Fl. Fr.* 3, 555.
Eriophorum vulgare, *Persoon Syn.* 70.
Eriophorum latifolium, *Hoppe Bot. Tasch.* 1800, 109.

Bogs; perennial; April.

Root fibrous, thick; *culm* erect, small, 2 inches high, leafy, above rather 3-sided; *edge* and ridge of the leaves rough, apex 3-sided; *sheaths* white, leafless; *panicle* terminal; *bracteæ* 2 or 4, green, shorter than the spike, black and sheathing at bottom; *peduncles* upright, very short, growing long and pendulous.

β. *ramosum.* *Peduncles* branched.

4. *Eriophorum angustifolium.* *Narrowleaved cottongrass.*

Culm roundish; *leaves* channelled, plaited; *spikes* drooping; *peduncles* not branched, very smooth.

Linagrostis, *Raii Syn.* 435, 1.
Gramen tomentarium, *Ger. em.* 29.
Gramen junceum lanatum, vel Juncus bombycinus vulgaris, *Park.* 1271.
Linagrostis § 2, No. 3, *Micheli N. P. G.* 54.
Eriophorum polystachion, *Huds. Fl. Ang.* 21.
Eriophorum angustifolium, *Hoppe Bot. Tasch.* 1800, 107.
Eriophorum polystachion β, *Willd. S. P.* 1, 313.
Cotton grass.

Turf bogs; perennial; April.

Root creeping, scaly; *culms* slender, smooth, a foot high, round, 3-sided above; *leaves* long, slender, acutely keeled, edge smooth; *panicle* 4 to 8-spiked; *bracteæ* leaflike, unequal; *spike* sometimes dioicous or polygamous.

β. *Alpinum.* *Panicle* 2 or 3-spiked.

5. *Eriophorum gracile.* *Slender cottongrass.*

Calami 3-sided; *leaves* filiform, 3-sided, channelled; *spike* erect, peduncled, overtopping the bracteæ; *peduncles* rough.

Eriophorum triquetrum, *Hoppe Bot. Tasch.* 1800, 108.
Eriophorum gracile, *Roth Catal.* II. Appendix.
Linagrostis paniculata β, *La Marck Fl. Fr.* 3, 555.

Bogs; perennial; April.

Roots creeping; *culms* slender, 18 in. high; *leaves* channelled at bottom; *lower sheaths* brown; *spikelets* 3 or 4, oblong, fruitbearing, drooping; *peduncles* unequal.

V. 10. GRAMINEÆ.

Flower hermaphrodite, or unisexual, glumaceous; *glumes* 1, 2, or manyflowered, or 2-rowed on a common rachis; *spathelles* 2 or none; *glumelle* of 1 or 2 spathellules; *spathellules* dissimilar; outer mostly carinate, 1 or many-ribbed, awnless, bristled, or awned; *lower* mostly 2-ribbed, awnless, rarely 2-awned, sometimes more; *lodicule* 1 or 2, hypogynous, small, inserted mostly side by side between the external spathellule, and the stamens, rarely opposite, alternating with the valves, or wanting; *stamens* 3, hypogynous, rarely 1 or 2; *anthers* 2-celled, 2-forked; *ovary* 1, free, 1-seeded; *style* 2 or 3; *stigmata* feathered, hispid, or aspergilliform; *cariopsis* membranaceous; *corculum* small, basillary; *perisperm* farinaceous.—*Herb* annual or perennial; *root* fibrous; *culm* cylindrical, fistulous, jointed, mostly simple; *leaves* alternate, 1 at each joint, sheathing; *sheath* divided lengthways; *flowers* small, panicled or spiked.

1. *Locustæ all alike; flowrets enclosed in the same receptacle.* Monothalama.

A. *Axis not jointed; glumes inserted alternately.*

a. *Glumes 1-flowered; lower spathelle largest.*

Spathellule 1, awned; *axis* spiked;
spike not involucrated ..... ALOPECURUS. 85.

Spathellule 1, awned; *axis* panicled;
spathellule nicked at the apex ..... AGRAULUS. 91.

Spathellules 2, awnless, acute; *lodicule* lanceolate; *glumelles* not notched. ..... MILIUM. 98.

Spathellules 2, awnless, acute; *lower spathellule* 3-cut. ..... VILFA. 88.

Spathellules 2, lower ending in a bristle; *lower spathellule* 2-cut ..... CALAMAGROSTIS. 93.

Spathellules 2, lower with a bristle below the apex; *glumes* nearly equal, obtuse, nicked, with a long bristle ..... POLYPOGON. 95.

Spathellules 2, lower ending in an awn; *spathellules* cartilaginous; *awn* jointed ..... STIPA. 97.

Spathellules 2, lower ending in an awn; *spathellules* membranaceous; *awn* not jointed ..... ACHNATHERUM. 92.

Spathellules 2, lower with an awn below the apex, 3 or 4-toothed; *glumes* very long, base ventricose ..... GASTRIDIUM. 94.

b. *Glumes* 1-*flowered; lower spathelle smallest; spathellules* 2.

Spathellules awnless, lower many-toothed; *glumes* truncated, mucronate ..... PHLEUM. 83.

Spathellules awnless, lower acute; *glumes* very acute; *locusta* spiked, unilateral. ..... SPARTINA. 87.

Spathellules mucronate below the apex; *stigmata* 3; *awns* turbinate, 3-sided; *panicle* spiked. ..... PSAMMA. 86.

Spathellule lower, with a bristle below the apex; upper 2-cut; *stigmata* 2; *panicle* compound ..... APERA. 90.

Lower spathellules ending in a bristle; *glume* truncated, fringed; *axis* digitate .... MIBORA. 99.

Lower spathellules awned below the middle; *bristles* 2, at the top; *panicle* spiked LAGURUS. 96.

c. *Glumes imperfectly* 2-*flowered; spathellules* 2, *awnless.*

Rudiment of the abortive flowret sessile, subulate; *glumes* nearly equal, boatshaped, gibbous ..... PHALARIS. 84.

Rudiment of the abortive flowret pedicelled, filiform; *glumes* equal; *lodicule* lanceolate, small ..... CHILOCHLOA. 82.

Rudiment of the abortive flowret pedicelled, clavate; *glumes* very short, persisting; *axis* digitate ..... CYNODON. 51.

d. *Glumes 2-flowered; flowers polygamous; spathellules 2.*

Spathellules awnless; *lower glumes* very minute; *axis* digitate; *locusta* unilateral.. DIGITARIA. 100.

Spathellules awnless; *lodicule* obtuse; *axis* panicled; *locusta* involucrated with bristles ..... SETARIA. 101.

Spathellule lower, ending in a bristle; *glumes* and *glumelles* of the lower flowret hairy ..... ECHINOCHLOA. 102.

Lower spathellule awned on the back below the middle; *apex* 2-lobed; *lower flowret* male ..... ARRHENATHERUM. 75.

e. *Glumes 3, or many-flowered; flowers polygamous.*

Spathellules awnless; *glumes 5* or 7-flowered; *upper flowret* hermaphrodite, base girt with woolly hairs ..... ARUNDO. 71.

Lower spathellule awned; *glume* 3-flowered; *middle flowrets* hermaphrodite, awnless ANTHOXANTHUM. 78.

f. *Glumes 2 or many-flowered; flowers hermaphrodite.*

Spathellules awnless; *locustæ* 2 in each involucrum; *involucrum* 1-leaf, lobed; *lobes* pinnatifid ..... CYNOSURUS. 68.

Spathellules awnless, cordate, not notched; *involucrum* 0; *glumes* compressed, base cordate, subauriculated ..... BRIZA. 55.

Spathellules awnless, ovate, not notched; *involucrum* 0; *glumes* ovate; *upper floscule* abortive, pedicelled ..... MELICA. 57.

Spathellules awnless, lanceolate, acute; *involucrum* 0; *stigmata* aspergilliform; *seed* bimucronate ..... MONILIA. 56.

Spathellules awnless; upper 2-cut, toothed; *involucrum* 0; *stigmata* villose; *lodicule* ovate, smooth ..... POA. 54.

Lower spathellule mucronate, 2-lobed; upper 2-toothed; *locustæ* elongated; *flowrets* 2-rowed, imbricate ..... MEGASTACHYA. 53.

Lower spathellule mucronate; *locustæ* shorter than the glumes; *lodicule* lanceolate ..... TRIODIA. 58.

Lower spathellule ending in a bristle; *spike* involucrated; *style* simple; *lodicule* subulate ..... SESLERIA. 69.

Lower spathellule with a very short seta below the tip; *upper* 2-cut; *panicle* spiked KOELERIA. 67.

Lower spathellule with a short seta below the tip, nicked; *upper* 2-cut; *panicle* compound, glomerated ..... DACTYLIS. 66.

Lower spathellule with a long seta below the tip, nicked; *upper* 2-cut; *locusta* few-flowered; *panicle* compound ..... ZERNA. 61.

Lower spathellule with a straight awn and cordately nicked below the tip; *locustæ* many-flowered; *panicle* loose ..... BROMUS. 62.

Lower spathellule with a flexuous awn on the back; *flowrets* dissimilar, lower almost awnless ..... HOLCUS. 79.

Lower spathellule with a flexuous awn above the middle; *flowrets* all alike; *apex* 2-bristled TRISETUM. 72.

Lower spathellule with a plaited awn above the middle; *flowrets* all alike; *bristles* none; *seed* husked ..... AVENA. 74.

Lower spathellule torn, awned below the middle; *awn* filiform, plaited, twisted; *seed* free AIRA. 77.

Lower spathellule not notched, awned below the middle; *middle* of the awn jointed, woolly; below twisted; above clubshape CORYNEPHORUS. 81.

Lower spathellule many-toothed, awned at the base; *awn* straight, scarcely longer than the glumelle ..... DESCHAMPSIA. 80.

Lower spathellule 2-toothed, apex awned; *upper* obtuse, truncated; *lodicule* ovate .. DANTHONIA. 73.

B. *Axis jointed or toothed; glumes inserted parallely.*

a. *Locustæ many-flowered; flowrets hermaphrodite.*

Spathellules awnless; lower erose, many-toothed; *glumes* margin hyaline; *lod.* heart-shape ..... GLYCERIA. 65.

Spathellules awnless, lower truncate, erose, toothed; *glumes* 3-toothed; *lodicule* lanceolate CATABROSIA. 76.

Spathellules awnless; lower heartshape, nicked, obtuse; upper not nicked; *lod.* nicked; *locusta* unilateral ..... SCLEROCHLOA. 52.

Lower spathellule with a bristle below the apex; *apex* nicked; *proper peduncle* inflated, wedgeshape .... SCHEDONORUS. 60.

Lower spathellule ending in a very short bristle; apex not nicked; *stamens* 3; *locusta* panicled; *prop. ped.* inflated, wedgeshape .. FESTUCA. 63.

Lower spathellule ending in a long bristle; apex not nicked; *stamen* 1; *locusta* panicled; *prop. ped.* inflated, wedgeshape ..... VULPIA. 64.

Lower spathellule ending in a bristle; upper obtusely truncated; edge stiff-haired; *locusta* 1 in each joint of the rachis.. BRACHYPODIUM. 59.

Lower spathellule ending in a short seta; upper nicked, 2-cut; *ovary* bald; *locusta* 1 in each tooth of the rachis ..... AGROPYRON. 49.

Lower spathellule ending in a short seta; 2-cut, toothed; *lodicule* unequally 2-toothed; *locusta* 1 in each tooth of the rachis; lower 1-glumed ..... LOLIUM. 48.

Lower spathellule ending in a short seta, toothed; *lodicule* not notched; *glumes* broad, boatshaped, nearly equal; *locustæ* 1 in each tooth of the rachis; *ovary* bearded ..... TRITICUM. 50.

Lower spathellule ending in a long bristle, entire; *lodicule* entire; *glume* awlshape; *locustæ* 1 in each tooth of the rachis ..... SECALE. 46.

Lower spathellule ending in a seta, not nicked; *lodicule* not notched; *locustæ* 2 or 3 in each tooth of the rachis, all 2-glumed .... ELYMUS. 47.

b. *Locustæ* 1-*flowered.*

Spathellules ending in a seta; *locustæ* 3 in each tooth of the rachis; all fruitful..... HORDEUM. 44.

Spathellules ending in a seta; *locustæ* 3 in each tooth of the rachis; 2 lateral barren ZEOCRITON. 45.

Spathellules membranaceous, awnless; *glume* cartilaginous, half immersed; *spike* cylindrical..... OPHIURUS. 43.

Spathellules convolute; lower subulate, awnless; *glumes* none; *spike* 1-rowed..... NARDUS. 42.

2. *Locustæ dissimilar, each sort enclosed in its proper receptacle.* Polythalama.

A. *Axis whole, not pointed, nor toothed; glumes often unequal, inserted alternately.*

a. *Axis androgynous; locustæ* 1-*flowered.*

Neut. flow. remote; *spathelle* 1; *herm. flow.* peduncled; *lower spathellule* with a bristle below the apex ..... CHRYSURUS. 70.

A. HORDEACEÆ. *Rachis* spiked; *spikelet* solitary, in pairs, or many, 1 or many-flowered; *glumes* opposite, equal; *lower spathelle* bearded or awnless; *upper spathelle* 2-keeled; *styles* 2.

I. 42. NARDUS. Theophrastus. *Matgrass.*

Glume 0; *spathellules* 2, oblong, convolute; *lower spathellule* awlshape; *styles* and *stigmata* simple, hairy; *cariopsis* free, furrowed.—*Rachis* toothed, spiked; *spike* simple, filiform; *locustæ* 1-rowed.

Nardus stricta. *Stiff matgrass.*

Spike setaceous, straight, 1-rowed.

Gramen sparteum junciformium, *Raii Syn.* 393, 2.
Spartum nostras, parvum Lobelio, *Ger. em.* 43.
Spartum parvum, Batavicum et Anglicum, *Park.* 1199.
Nardus stricta, *Lin. S. P.* 77.
Small matweed.

Moist sandy heaths; perennial; July.

Culm bent at top, 6 in. high, stiff, rather angular, smooth; *leaves* radical, closely tufted; *spike* terminal, single, slender.

II. 43. OPHIURUS. Gærtner. *Snaketail.*

Glume cartilaginous, half immersed in a hollow of the rachis, longer than the glumelles; *glumelles* membranous, hyaline; *ovary* rather naked, cordate; *stigmata* feathered.—*Rachis* jointed, toothed, spiked; *spike* simple, awlshape; *culm* branchy.

1. *Ophiurus incurvatus.* *Bent snaketail.*

Spike round, awlshape, incurved; *spathelles* adpressed; 1-flowered; *leaves* flat; *floscules* awnless.

Ægilops incurvata, *Lin. S. P.* 1491.
Agrostris incurvata, *Scop. Fl. Carn.* 1, 62.
Rottbollia incurvata, *Lin. Supplem.* 114.
Sea hard grass.

Fields and meadows near the sea; annual; August.

Culm rather compressed, very smooth, shining, kneed, procumbent at bottom; *leaves* spreading, short smooth on the back; *sheaths* rather tumid, compressed; *ligula* very short, truncate; *spike* and *rachis* smooth; *spathelles* when in full flower patent, nearly equal, 3-ribbed; *outer spathelle* larger, 1-ribbed.

2. *Ophiurus erectus.* *Upright snaketail.*

Spike round, subulate, rather compressed, upright; *spathelles* 2, swordshape, 1-flowered; *flowret* awnless; *leaves* channelled, subulate.

Rottbollia erecta, *Savi Giorn. Pis.* 4, 230.
Rottbollia filiformis, *Willd. S. P.* 1, 464.
Rottbollia incurvata β, *De Cand. Syn. Fl. Fr.* 1653.

Fields near the sea; perennial? August.

III. 44. HORDEUM. Theophrastus. *Bere.*

Locustæ 3 in each tooth of the rachis, 1-flowered, all the florets fertile; *spathelles* 2, awlshape; *lower spathellule* bristle pointed; *upper spathellule* not nicked, rather obtuse; *lodicule* blunt, not nicked, smooth; *ovary* bearded at the tip; *stigmata* villose; *cariopsis* husky, furrowed.—*Rachis* jointed, toothed, spiked; *spike* not branched.

Cultivated largely for malting, especially in Scotland.

1. *Hordeum hexastichum.* *Six-row bere.*

Seeds disposed in six rows.

Hordeum polystichum hybernum, *Raii Syn.* 388, 3, confounded with hordeum tetrastichum.
Hordeum hexastichon, *Lin. S. P.* 125.
Hordeum vulgare β, *Lam. Fl. Fr.* 623.
Full 6-sided big or bere. Round barley. Winter barley. Greek barley.

Cultivated, sown in autumn; biennial; June and July.

Root and *leaves* like hordeum distichum; *culm* 3 feet high; *spike* cylindrical, nearly erect; *beards* more than twice as long as the spikes; *cariopsis* spread out.

Used as food for horses in warm countries, and for malting.

2. *Hordeum tetrastichum.* *Four-row bere.*

Seeds in four rows.

Hordeum polystichum, *Raii Syn.* 388, 3; *Park.* 1130.
Hordeum polystichum vernum, *Ger. em.* 70.
Hordeum vulgare, *Lin. S. P.* 125.
Triticum vulgare, *Salis. Prod.* 27.
Square Barley. Big. Bear.

Cultivated like the preceding, with which it is generally confounded.

Spike slightly compressed; *beards* nearly twice as long as the spike; *cariopsides* 20 to 45, those on the sides spread out, the others adpressed, more numerous but many imperfect.

β. *nudum*. *Glume* not adhering to the cariopsis.

Triticum spica hordei, *Raii Syn.* 387, 7.
Hordeum nudum, *Ger. em.* 72.
Zeopyrum, sive Tritico-speltum, *Park.* 1123.
Hordeum vulgare β cœleste, *Lin. S. P.* 125.
Naked barley. Black barley. Barley wheat.

Grown by few, but praised by them as excellent for malting.

IV. 45. ZEOCRITON. C. Bauhin. *Barley.*

Locustæ 3 in each tooth of the rachis, 1-flowered; the middle floret fertile, the two lateral florets neutral or barren; *spathelles* 2, awlshaped; *lower spathellules* bristle-pointed; *upper spathellule* not nicked, blunt; *lodicule* blunt, not nicked, smooth; *ovary* bearded at the tip; *stigmata* villose; *cariopsis* husked, furrowed.—*Rachis* toothed, jointed, spiked; *spike* simple.

1. *Zeocriton distichon.* *Two-rowed barley.*

Lateral flowers beardless; *cariopsides* angular, lying one over the other.

Hordeum distichum, *Raii Syn.* 388, 1; *Ger. em.* 70; *Park.* 1130; *Lin. S. P.* 125.
Zeocriton distichum, *Palis. de Beauvois.*
Barley. Spring barley.

Cultivated largely for malting, especially in England: the decorticated seeds make a cooling and demulcent drink by being boiled in water; and the flour is made in some parts into bread, which must be baked almost as soon as it is made up, as it grows sour very soon. The wort made of the malt is antiseptic, and still more the yeast, or froth that collects during the fermentation, which is also a valuable febrifuge. The fermented wort, of which there are many varieties, is stimulant, cordial, and well supplies the want of wine.

Beard more than twice as long as the spike.

β. *nudum*. *Spathelle* not adhering to the cariopsis.

Turkie barley, *Park.* 1129.

Seeds elliptic, tawny, glabrous.

2. *Zeocriton vulgare.* *Common barley.*

Lateral flowers beardless; *cariopsides* angular, patent.

Hordeum distichum, spica breviore et latiore, granis confertis, *Raii Syn.* 388, 2.
Hordeum distichum minus, *Park.* 1129.
Hordeum Zeocriton, *Lin. S. P.* 125.
Sprat barley Battledore barley.

Cultivated, but not commonly.

Spike compressed, ovate, lanceolate; *beard* terminal, sometimes more than three times as long as the spike.

3. *Zeocriton murinum.* *Wall barley.*

Flowrets three; *spathelle* of the intermediate flowret linear, lanceolate, ciliated; *spathelles* of the outer flowrets bristled, rough; *sheaths* smooth.

Gramen secalinum, Secale sylvestre, *Raii Syn.* 391, 1; *Ger. em.* 73.
Hordeum spurium vulgare, *Park.* 1147.
Hordeum murinum, *Lin. S. P.* 125.
Triticum murale, *Salis. Prod.* 27.
Zeocriton murinum, *Palis. de Beauvois.*
Way bennett. Wild Rye. Mouse barley.

Ruins and waysides; annual; the whole summer.

Culms many, a foot long, erect, bent at bottom, leafy; *leaves* light green, rough; *sheaths* nearly as long as the leaves, rather bellied, very bald; *stipula* very short; *spike* about 3 in. long.

4. *Zeocriton secalinum.* *Rye barley.*

Flowrets three; *side-flowrets* with short aristæ; *spathelles* of all the flowrets setaceous, rough; *locustæ* smooth; *sheaths* smooth.

Gramen secalinum, *Raii Syn.* 392; *Ger. em.* 29 *.
Gramen secalinum majus et minus, *Park.* 1144.
Hordeum nodosum, *Lin. S. P.* 126.
Hordeum murinum β, *Lin. S. P.* 126.
Hordeum pratense, *Huds. Fl. Ang.* 56.
Hordeum secalinum, *Willd. S. P.* 1, 45.
Zeocriton secalinum, *Pal. de Beauv.*
Tall meadow rie-grass.

Meadows and pastures; perennial; June.

Culm 18 in. high, erect, slender, leafy below, naked above; *leaves* spread, acute, roughish; *sheaths* a little bellied; *ligula* very small; *spike* short, narrow; *setæ* short.

5. *Zeocriton maritimum.* *Sea barley.*

Spathelles rough, inner spathelle of the lateral flowrets semilanceolate; the rest setaceous; *leaves* flat, soft.

Gramen secalinum palustre et maritimum, *Raii Syn.* 392, 3.
Hordeum maritimum, *With. Bot. Ar.* 172.
Hordeum marinum, *Huds. Fl. Ang.* 57.
Zeocriton maritimum, *Pal. de Beauvois.*
Squirrel-tail grass. Marsh rye-grass.

Grass lands by the sea; annual; June, July.

Leaves rather glaucous; *locustæ* pyramidal, compact; *setæ* long, stiff, and strongly barbed.

V. 46. SECALE. Pliny. *Rye.*

Locusta 1 sessile in each tooth of the rachis, 2 or 3-flowered, 2 lower fertile, sessile, opposite, uppermost abortive; *spathelles* subulate, opposite, not notched, shorter than the glumes; *lower spathellule* not notched, ending in a very long bristle; *upper* 2-cut, toothed; *lodicule* obovate, not notched, pilose; *ovary* bearded; *styles* 2; *stigmata* feathered; *cariopsis* husked, furrowed.— *Rachis* jointed, toothed, spiked; *spike* simple; *locustæ* crowded, imbricate.

Secale cereale. *Harvest rye.*

Outer spathellule prickly, ciliated.

Secale, *Raii Syn.* 388, 1; *Ger. em.* 68.
Secale vulgatius, *Park.* 1128.
Secale cereale, *L. S P.* 124.
Triticum cereale, *Salis. Prod.* 27.

Cultivated in fields; annual; sown in autumn, for bread either alone, or mixed with wheat to form meslin bread, not drying so soon as wheat bread: and still more for fermentation, and the manufacture of rye, malt, or corn-spirit. The straw is split, and plaited into women's hats, &c.

Root fibrous; *culm* above naked, smooth, erect; *leaves* erect; *sheaths* long, smooth; *ligula* very short; *spike* erect; *locustæ* glaucous, smooth.

β. *compositum.* *Spike* branching.

γ. *vernum.* *Spike* small, slender; *plant* small.

Secale vernum seu minus, *Raii Syn.* 388, 2.
Secale æstivum seu minus, *Park.* 1129.

Sown in the spring.

VI. 47. ELYMUS. Micheli. *Lymegrass.*

Locustæ 2 or more in each tooth of the rachis, 3 to 9-flowered; *spathelles* in pairs nearly equal; *lower spathellule* not notched, bristled; *bristle* sometimes very short; *upper spathellule* 2-cut, toothed; *lodicule* ovate, whole,

hairy; *ovary* bearded; *stigmata* feathered; *cariopsis* husked, furrowed.—*Rachis* jointed, toothed, spiked; *spike* simple; *locustæ* crowded.

a. *Locusta more than 2-flowered.* Elymus.

1. *Elymus arenarius.* *Sand lymegrass.*

Spike erect, close; *locustæ* mostly 3-flowered, downy; in two rows in the top and bottom of the spike, in three in the middle; scarcely shorter than the ciliated glume; *flowrets* awnless; *leaves* involute, stiff.

Elymus arenarius, *Lin. S. P.* 122.
Hordeum villosum, *Mœnch Meth.* 199.

Sandy sea-shores; perennial; July.

Root creeping; *culm* 4 feet high, upright, stiff; *leaves* upright, firm, glaucous; *ligula* very short, crenulate; *spike* about 7 in. long, subcompressed, closely set.

2. *Elymus geniculatus.* *Bent lymegrass.*

Spike loose, first erect, afterward bent and drooping; *locustæ* 3 or 4-flowered, pubescent, lower ones remote; *spathelles*, short, smooth; *leaves* involute, stiff.

Elymus geniculatus, *Curtis Br. Gr.* 46.

Culm 6 feet high, slender; *leaves* very narrow; *spike* 18 in. to 2 feet long, flowrets remote, so that the rachis is visible, the lower flowrets at a great distance from one another; *rachis* bent twice, so that the tip hangs perpendicularly down; *spathelles* half as long again as the locustæ, smooth; *locustæ* 4-flowered.

b. *Locustæ 2-flowered.* Cuvieria.

3. *Elymus? europæus.* *Europe lymegrass.*

Spike erect; *locustæ* in threes, 1 or 2-flowered, bearded, rough; *spathelles* linear, awlshape, bearded, as long as the locustæ; *leaves* flat, smooth; *sheath* hairy.

Gramen secalinum majus sylvaticum, *Raii Syn.* 392, 3.
Gramen secalinum maximum, *Park.* 1144.
Elymus europæus, *Lin. Mant.* 35.
Hordeum sylvaticum, *Huds. Fl. Angl.* 57.
Triticum sylvaticum, *Salisb. Prod.* 27.
Secale villosum, *Huds. Fl. ed.* 1, 46.
Cuvieria Europæa, *Kœl. Gram.* 328.
Great wood rye-grass.

Woods on chalky soils; perennial; June.

Culm erect, 2 feet high, striated, bald, leafy at bottom; *leaves* spreading; *sheaths* ribbed, rather bellied; *ligula* small, crenulate; *spike* about 2 in. long, blunt, close set; *flowrets* mostly perfect, bearded; *beards* twice as long as the flowret; *locustæ* subpedicelled, twoflowered, often only oneflowered, as long as the spathelles.

VII. 48. LOLIUM. Pliny. *Darnel.*

Locustæ sessile, 1-glumed; *terminal locusta* 2-glumed; *glumes* opposite; *lower spathelle* pointed at the tip, or with a bristle; *upper spathelle* membranous, 2-cut, toothed; *lodicule* 2-teethed; teeth unequal; *ovary* rather 3-sided; *stigmata* feathered; *cariopsis* husked, furrowed.—*Rachis* jointed, toothed, spiked; *spike* compound.

1. *Lolium perenne.* *Lasting darnel.*

Spike beardless; *locustæ* longer than the glume; *root* perennial.

Lolium q. Gramen loliaceum, angustiore folio et spica, *Raii Syn.* 395, 2.
Lolium rubrum, *Ger. em.* 78.
Lolium rubrum, sive Phœnix, *Park.* 1145.
Lolium perenne, *Lin. S. P.* 122.
Ray-grass. Red darnel. Crap.

Meadows, pathsides, and cultivated; perennial; June.

Culm a foot high; *leaves* deep green; *spike* nearly erect, 2-rowed, compressed; *rachis* bent alternately to take in the locustæ; *locustæ* alternate, erect, ovate, compressed, many-flowered; *glume* of one spathelle, lanceolate, not bearded, smooth, sometimes viviparous.

β. *tenue.* *Locustæ* few-flowered.

Lolium tenue, *Lin. S. P.* 122.

Leaves and *spike* thin; *locustæ* 3 or 4-flowered, not much compressed, yet longer than the glume.

In barren soils.

γ. *paniculatum.* *Spike* branched at bottom.

Lolium q. Gramen loliaceum paniculatum, *Raii Syn.* 395, 3.
Phœnix multiplici spicata panicula, *Park.* 1146.

δ. *compositum.* *Spike* compound, very short, 7 to 9-flowered, compressed, crowded.

ε. *viviparum.* *Glume* and *glumelle* changed into leaves.

ζ. *purpurascens.* *Locustæ* purplish green.

2. *Lolium temulentum.* *Intoxicating darnel.*

Spike bearded; *locustæ* smaller than the glume; *root* annual; *culm* rough above.

Lolium album, *Raii Syn.* 395, 1; *Ger. em.* 78; *Park.* 1145.
Lolium temulentum, *Lin. S. P.* 122.
Lolium annuum, *Lamarck Fl. Franc.*
Crachalia temulenta, *Schrank Fl. Bat.* 255.
Bromus temulentus, *Bern. Erford.* 49.
Bearded darnel.

Corn-fields and among flax; annual; June.

Culm erect, 2 feet high, very bald below, but rough above; *leaves* rough; *ligula* very short, blunt, crenulate; *spike* erect, large; *rachis* rough; *flowrets* many, awned a little below the tip; *awn* twice as long as the flowret.

Seeds ground with bread-corn produce headach and vertigo, if the bread is eaten hot; malted with barley, and made into malt-liquor it renders the liquor very intoxicative: if eaten by itself, or with but a little wheat-flour, it is even deleterious.

3. *Lolium arvense.* *Corn darnel.*

Spikes mostly awnless; *locustæ* and *glumes* of equal length; *root* annual.

Lolium arvense, *With.* 168.
Lolium temulentum, *Huds. Fl. Ang.* 55.
Lolium annuum, *Bern. Erford.* 1801.
White darnel.

Fields; annual; July.

Culm and *rachis* entirely bald; *leaves* bald, but sometimes rough at top; *glume* mostly of one spathelle, sometimes of two; *locustæ* rather longer than the glume; *flowret* apparently awnless; *awns* extremely short.

VIII. 49. AGROPYRUM. Gærtner. *Wheatgrass.*

Locustæ sessile or with short footstalks; *glume* 3 to 9-flowered, acute, not notched, opposite, shorter than the flowret; *lower spathellule* not notched, sometimes toothed; bristled; *bristles* sometimes very short or none; *upper spathellule* nicked or 2-cut, toothed; *lodicule* ovate, not nicked, hairy; *ovary* smooth; *stigmata* feathered; *cariopsis* husked, furrowed.—*Rachis* jointed, toothed, spiked; *spike* compound.

1. *Agropyrum junceum.* *Rush wheatgrass.*

Glume mostly 9-ribbed, blunt, 4 or 5-flowered; *flowret* awnless; *rachis* smooth; *root* creeping.

Gramen caninum, q. Gramen maritimum, spica loliacea, foliis pungentibus Plukenet, *Raii Syn.* 391, 4.
Triticum junceum, *Lin. S. P.* 128.
Triticum glaucum, *De Cand. Syn. Fl. Gall.* 1662.
Bromus truncatus, *Scopoli Fl. Carn.* 121.
Agropyrum junceum, *Pal. de Beauvois.*

Sea-shores, on the sands; perennial; July.

Root creeping; *culm* purplish at bottom, naked top and bottom, leafy in the middle; *leaves* glaucous, very smooth underneath, rough on the upper face; *ligulæ* very short; *spike* upright, 1 inch long; *spathelles* boatshape, furrowed, blunt.

β. *crassum.* *Leaves* less acute, convolute; *spike* thick.

Gramen caninum q. Gramen loliaceum supinum, spica crassiore Tournefortii, *Raii Syn.* 391, 5.

γ. *foliosum.* *Spike* leafy.

Gramen caninum maritimum, spica foliacea, *Raii Syn.* 391, 6.

2. *Agropyrum caninum.* *Dogs' wheatgrass.*

Glume with a short awn, 3 to 5-ribbed, mostly 5-flowered; *flowrets* bearded; *root* fibrous, perennial.

Gramen caninum aristatum, radice non repente, sylvaticum, *Raii Syn.* 390, 2.
Elymus caninus, *Lin. S. P.* 124.
Triticum caninum, *Huds. Fl. Ang.* 58.
Festuca nutans, *Moench Meth.* 191.
Agropyrum caninum, *Pal. de Beauvois.*
Bearded dog-grass.

Woods and hedges in chalky soils; perennial; July.

Root not creeping; *culm* 2 feet high; *leaves* ribbed, green, rough on both faces; *sheaths* smooth; *ligula* very short; *spike* 3 or 4 in. long, rather upright, then drooping, loose; *lower locustæ* often double, the rest alternate; *spathelles* equal, 3 or 5-ribbed, opposite; *awns* purplish, as long as the spathelle, or longer; *spathellules* ciliate.

3. *Agropyrum cristatum.* *Crested wheatgrass.*

Glume 3 to 5-flowered, awned; *locustæ* lanceolate, imbricate; *culm* pubescent.

Triticum cristatum, *Schreb. Gram.* 12.
Bromus cristatus, *Lestib. Anvers.* 339.
Agropyrum cristatum, *Rœm. Sys. Veg.* 758.

Rocks by sea-side; perennial; July, August.

Root creeping; *culm* upright, 18 in. high, procumbent at bottom, and taking root; *leaves* erect, close, striated; *sheaths* smooth; *ligula* short, truncate; *rachis* white, alternately toothed; *locustæ* compressed; pale green, 3 to 5-flowered; *spathelles* with short awns; *spathellules* 5-ribbed; *flowrets* crowded so as to depress each other.

4. *Agropyrum pungens.* *Pricking wheatgrass.*

Spike continued; *rachis* hispid; *locustæ* alternate 2-rowed; *spathelles* equal, acute, 5 to 7-ribbed; *spathellules* very short, mucronate; *leaves* flat at bottom, edge convolute at top, rather stiff, pungent; *root* creeping.

Gramen caninum maritimum spica triticea, *Raii Syn.* 390, 3.
Triticum repens γ, *Smith Fl. Brit.* 1, 158.
Triticum pungens, *Lamarck Fl. Fr. Supp.* 1662.
Agropyrum pungens, *Rœm. Sys. Veg.*

Sea-side.

Root creeping; *leaves* flat, apex rolled, smooth or hairy.

5. *Agropyrum repens.* *Creeping wheatgrass.*

Root creeping, white, jointed, soboliferous; *locustæ* oblong, mostly 4-flowered; *spathelles* awnless; *spathellules* mucronated, as long as the spathelles.

Gramen caninum q. Gramen spica triticea repens vulgare, caninum dictum, *Raii Syn.* 390, 1.
Gramen caninum, *Ger. em.* 23.
Gramen caninum vulgatius, *Park.* 1173.
Gramen *of the medical writers.*
Triticum repens, *Lin. S. P.* 121.
Bromus glaber, *Scop. Carn.* 1, 84.
Triticum arvense, *Schreber.*
Triticum infestum, *Salis. Prod.* 27.
Agropyrum arvense, *Rœmer Sys. Veg.* 754.
Dogs grass. Couch grass. Quitch grass.

Fields and gardens; perennial; July to August.

Root creeping; *culm* erect, 2 feet high, slender, leafy; *leaves* very spreading, nearly 1-rowed, rough on the upper surface and edge; *spike* rather erect, 2 to 3 in. long; *locustæ* small; *spathelles* often awned; *awns* of different lengths.

Root sweet, used as food for horses in many countries, also for man in time of scarcity, or medicinally as a demulcent and aperient, has also been proposed as a saccharine matter for brewing; but being a troublesome weed in gardens is mostly burnt; *leaves* eaten by dogs as an emetic, probably acting mechanically.

β. *subulatum.* *Locustæ* oblong, mostly 6-flowered; *spathelles* awlshape; *spathellules* mucronate, longer than the spathelles.

Triticum subulatum, *Schreber.*

γ. *dumetorum.* *Locustæ* either single, in pairs or in threes, oblong, 5 or 6-flowered; *spathelles* and *spathellules* awned; *awns* not a line long.

Triticum dumetorum, *Schreber.*
Triticum repens 3, *With. Bot. Arr.* 1, 229.

δ. *Leersianum.* *Locustæ* oblong, mostly 5-flowered; *spathelles* and *spathellules* awned; *awns* twice the length of the spathelle.

Triticum Leersianum, *Schreber.*
Triticum repens, *Fl. Dan.* 748.
Triticum sepinum, *Thuill. Fl. Par.* 67.

IX. 50. TRITICUM. Pliny. *Wheat.*

Locusta 1 sessile in each tooth of the rachis, 3 or 4-flowered; 2 lower flowerets sessile, opposite, fertile; uppermost often abortive; *spathelles* broad, boatshaped, nearly equal, opposite, toothed, ending in a short bristle; *spathellules* lower, toothed, ending in a short bristle; upper slightly nicked; *lodicule* ovate, not notched, hairy; *ovary* bearded at the tip; *style* 2-parted; *stigmata* feathered; *cariopsis* husked, furrowed.—*Rachis* toothed, jointed, spiked; *spike* simple; *locustæ* crowded, imbricate.

Farina of the seed is in general use as food for mankind, very nutritious on account of the gluten which it contains, and which is in greater proportion in the wheats grown in warm countries than in cold; *seed* used for the manufacture of starch, and it is malted and fermented into a kind of beer called mum; *husks* of the seeds used as a food for horses and swine; *straw* cut into chaff given to horses as a mechanical stimulus to the appetite.

a. *Cariopsis free; rachis flexible; glume coriaceous.*

1. *Triticum æstivum.* *Summer wheat.*

Spike parallel, compressed, bristled; *glumes* glabrous, bristled, truncated; base contracted, plaited; *bristle* from the base, obtuse, very short.

Triticum æstivum, *Raii Syn.* 387, 6 *; *Lin. S. P.* 126.
Triticum trimestre, *Park.* 1121.
Triticum vulgare, *Vill. Delph.* 2, 153.
Triticum segetale, *Salis. Prod.* 27.
Triticum vulgare α, *Willd. Hort. Berol.* 1, 135.
Triticum sativum, *Lam. Enc. Meth.* 2, 554.

Cultivated in fields; annual; sown in spring.

Culm erect, many, glabrous; *leaves* flat; *sheath* round, smooth; *ligula* truncated; *spike* subquadrate; *locusta* smooth.

β. *album.* *Spike* white; *cariopsides* white.

γ. *albo-rubrum.* *Spike* white; *cariopsides* red.

δ. *rubro-album.* *Spike* red; *cariopsides* white.

ε. *rubrum.* *Spike* red; *cariopsides* red.

2. *Triticum compositum.* *Manyeared wheat.*

Spike compound; *locusta* 3-flowered, turgid, ventricose, roundish, imbricate, bristled; uppermost flowret barren, awnless.

Triticum spica multiplici, *Raii Syn.* 387, 6; *Ger. em.* 66; *Park.* 1120, 4.
Triticum compositum, *Lin. Suppl.* 115.
Egyptian wheat.

Cultivated in fields; annual;

Culm not hollow at top; *leaves* smooth, flaccid; *spike* thick, less 2-rowed than summer-wheat, mostly villose, bristled; *bristle* long, coloured.

3. *Triticum turgidum.* *Turgid wheat.*

Spike parallel, compressed; *locusta* 4-flowered, ventricose, pubescent, imbricate, bristled; uppermost flowret barren; *glumes* obtuse.

Triticum aristatum spica maxima cinericea, glumis hirsutis, *Raii Syn.* 387, 4.
Triticum turgidum, *L. S. P.* 126.
Duckbill wheat. Square gray wheat. Gray pollard wheat.

Cultivated in fields.

Leaves smooth; *locusta* very turgid, velvety, villose, purplish; *bristle* red, shining.

β. *submuticum.* *Glumes* awned; *awns* short.

γ. *aristatum.* *Glumes* awned; *awns* as long as the spike.

Triticum spica villosa quadrata longiore aristis munitum, *Raii Syn.* 387, 3 *.
Triticum lucidum, *Park.* 1120.
Triticum aristis circumvallatum, *Ger. em.* 66.
Cone wheat. Normandy wheat. Red wheat.

4. *Triticum hybernum.* *Winter wheat.*

Spikes parallel, compressed, nearly awnless; *glumes* gibbous, truncated, mucronate; base contracted, plaited; rib obtuse, prominent.

Triticum spica mutica, *Raii Syn.* 386, 1; *Ger. em.* 65; *Park.* 1120.
Triticum hybernum, *Lin. S. P.* 126.
Triticum segetale, var. *Salisb. Prod.* 27.
Triticum vulgare β, *Willd. Hort. Berol.* 135.
Triticum sativum β, *Lam. Enc. Meth.* 554.

Cultivated in fields; sown in autumn, and reaped the following year.

β. *aristatum.* *Spikes* bristled.

Triticum aristis circumvallatum, granis et spica rubescentibus, glumis lævibus et splendentibus, *Raii Syn.* 387, 2.
Red-eared bearded wheat.

b. *Cariopsis free; rachis flexible; glume leaflike.*

5. *Triticum? Polonicum.* *Polish wheat.*

Spike irregular; *locusta* 3 or 4-flowered, ventricose, rough, imbricate; *awn* long; 2 intermediate flowrets barren, awnless; *glumes* unequal, ciliated.

Triticum majus longiore grano glumis foliaceis incluso, seu T. Poloniæ dictum, *Raii Syn.* 387, 5.
Triticum Polonicum, *Lin. S. P.* 478.
Triticum glaucum, *Moench Method.*

Spike irregular, grey; *locusta* 3 to 5-flowered, long; *awns* very long; *spathelles* long; *outer spathellule* double the length of the inner; *cariopsis* long; apex pubescent.

c. *Cariopsis husky; rachis brittle; spike obtusely compressed.*

6. *Triticum monococcum.* *One-seeded wheat.*

Spike simple, compressed; *locusta* 2-flowered, ventricose, imbricate, 1-seeded; *awn* of the fertile flowret long; *apex* of the glume 3-toothed; *rachis* bearded; *barren flowret* awnless.

Briza monococcos, *Ger. em.* 73.
Zea monoccos aristis munita, *Park.* 1124.
Triticum monococcum, *Lin. S. P.*
Brant barley. St. Peter's corn.

Cultivated in fields; annual; sown in autumn.

Culm 1 or 2 feet high: *leaves* ciliated: *ligula* toothed; *spike* like rye, white, very smooth, margin of the rachis pubescent; *locusta* shining.

β. *rubrum.* *Spike* pale red, pubescent.

d. *Cariopsis husked; rachis brittle; spike parallelly compressed.*

7. *Triticum spelta.* *Spelt wheat.*

Spike simple, compressed; *locusta* 3-flowered, ventricose, rough, bristled; middle flowret barren, awnless; *glumes* obtuse; *margin* of the rachis very smooth.

Triticum amyleum, *Ger. em.* 69.
Olyra, *Park.* 1126.
Zea verna, *Raii Hist.* 1243.
Triticum spelta, *Lin. S. P.* 127.
Starch corn.

Cultivated in fields; annual; sown in spring.

Culm short, pubescent; *leaves* woolly; *spike* slender, long, 2-rowed, smooth.

β. *muticum.* *Spike* awnless.

Zea, sive Spelta, *Ger. em.* 69.
Zea dicoccos spica mutica, *Park.* 1124.
Spelt corn.

B. CHLORIDEÆ. *Rachis* spiked; *locustæ* solitary, rarely many-flowered, upper-flowret abortive, 2-formed; *glumes* keeled, not opposite; *lower spathellule* very often awned, rarely awnless, upper 2-keeled; styles 2.

X. 51. CYNODON. Richard. *Dogstoth.*

Spathelles alternate, half 2-flowered, membranaceous, persisting, shorter than the flowrets; *glumelle* awnless; *upper spathellule* 2-cut, toothed; *rudiment* of the abortive flower pedicelled, smooth, clavate; *lodicule* obtuse, truncated; *stigmata* aspergilliform; *cariopsis* not furrowed; *spike* digitate; *locustæ* 4 or 5, filiform, simple, slender, unilateral, in a single row.

Cynodon sarmentosum. *Creeping Dogstooth.*

Runners creeping; *spike* digitate, spreading, inner base villose; *locustæ* single, sessile; *glumes* very spreading, rough; *edge* of the leaves ciliated.

Gramen Dactylon q. Gramen repens cum panicula graminis Mannæ, *Raii Syn.* 399, 1.
Gramen Canarium ischæmi paniculis, *Park* 1179.
Gramen dactyloides radice repente, *Ger. em.* 28.
Panicum dactylon, *Lin. S. P.* 85.
Digitaria littoralis, *Salisb. Prod.* 10.
Digitaria dactylon, *Scop. Carn.* 73.
Paspalum dactylon, *Lam. Ench. Meth.* 5, 32.
Digitaria stolonifera, *Schrad. Germ.* 1, 165.
Fibichia umbellata, *Koel. Gram.* 309.
Cynodon dactylon sarmentosum, *Per. Syn.* 1, 85.
Creeping cocksfoot grass.

Sandy sea-shore; perennial; July, August.

Root sarmentose, jointed; runners prostrate, many; *culm* ascending, 9 in. long; *leaves* short, glaucous, spreading, slightly 5-ribbed, edge scariose, back hirsute; *sheaths* hirsute; *ligula* pilose; *spike* filiform, spreading, purplish.

C. BROMEÆ. *Rachis* panicled; *locusta* solitary, 1, 2, or many-flowered; *glumes* keeled; *glumelles* of the same consistence as the glumes; *lower spathellule* concave or carinate, awned or awnless; upper 2-keeled; *styles* 2.

XI. 52. SCLEROCHLOA. Beauvois. *Spraygrass.*

Spathelles parallel, unequal, 3 to 5-flowered, obtuse, shorter than the flowrets; *lower spathellule* cordately nicked, obtuse; *upper* not nicked; *lodicule* nicked? *ovary* beaked; *stigmata* feathered; *cariopsis* free, furrowed? beaked, beak 2-cut; *rachis* panicled or spiked; *locustæ* 2-rowed, sessile, hermaphrodite.

Sclerochloa procumbens. *Procumbent spray-grass.*

Panicle lanceolate, contracted, unilateral, rough; rachis round; *locustæ* 3, 4, or 5-flowered; *flowrets* bluntly ribbed.

Poa procumbens, *Curtis Lond.* 11.
Poa rupestris, *With.* 146, 126.
Sclerochloa procumbens, *Pal. de Beauvois.*

Inundated sea-rocks and ruins; annual; July, August.

Root fibrous, tufted; *culm* prostrate, mostly 6 in. long; *leaves* glaucous, very long sheathed, broad, acute, flat, acutely ribbed, rather rough; *ligula* torn; *panicle* stiff; *locusta* lanceolate, glaucous; *spathelles* obtuse, very unequal, keeled, outer 5-ribbed; *spathellules* linear, 5-ribbed, apex membranaceous, torn, inner ciliated.

XII. 53. MEGASTACHYA. Beauvois. *Ferngrass.*

Spathelles alternate, 5 to 20-flowered; shorter than the flowrets; *lower spathellule* nicked, mucronate between the teeth; *upper* 2-cut, toothed; *stigmata* villose; *cariopsis* free, not furrowed; *panicle* compound; *locusta* long, pedicelled; *flowrets* 2-rowed, imbricate, hermaphrodite.

Megastachya rigida. *Stiff ferngrass.*

Panicle 2-ranked, 1-rowed, contracted, stiff, smooth; *locusta* linear, acute, 5 to 11-flowered; *rachis* margined; *spathellules* free, obsoletely 5-ribbed; *root* fibrous.

Gramen pratense q. Gramen exille duriusculum in muris et aridis proveniens, *Raii Syn.* 410, 8.
Gramen minus duriusculum, *Ger. em.* 4.
Gramen panicula multiplica, *Park.* 1157.
Poa rigida, *Lin. S. P.* 101.
Megastachya rigida, *Pal. de Beauv.* 74.
Small hard grass.

Dry sandy places and walls; annual; June, July.

Culm many, 1 to 6 in. high, erect, stiff, rather compressed, smooth; *leaves* slender, acute, short, often convolute; *sheath* shining, bluish red; *ligula* short, obtuse, torn; *panicle* deep green, or purplish; *peduncle* short, alternate, 2-rowed; *spathelles* very slender, acute; *spathellules* very smooth, outer obsoletely 3 to 5-ribbed.

β. *maritima.* *Culm* prostrate, thick, stiff, glaucous, small.
Triticum maritimum, *Wulf in Jacq. Collect.* 3, 34.

XIII. 54. POA. Theophrastus. *Meadow grass.*

Spathelles alternate, 2 to 20-flowered, shorter than the floscules; *glumelles* sometimes joined at the base with wool; *lower spathellule* awnless; upper 2-cut, toothed; *lodicule* obtuse, not notched, smooth; *stamens* 2 or 3; *style* short, 2-parted; *stigmatà* villose; *cariopsis* free, furrowed; *panicle* compound, more or less branchy and effused.

a. *Locustæ very smooth; spathellules obtuse.*

1. *Poa aquatica.* *Water meadow-grass.*

Panicle equal, erect, very large, much branched; *locustæ* linear, 5 to 9-flowered; *glumelles* free at the base, 7-ribbed; *leaves* very broad, base spotted; *root* creeping.

Gramen pratense q. Gramen aquaticum majus, *Raii Syn.* 411, 13.
Poa aquatica, *Lin. S. P.* 98.
Poa altissima, *Moench Meth.* 185.
Reed meadow-grass.

Marshes and banks of rivers; perennial; June and July.

Culm thick, smooth, bald, 6 feet high, erect, compressed, 2-edged; *leaves* ensiform, smooth; base having 2 or 3 angular spots; *sheaths* smooth, bald; *ligula* truncated; *panicle* obtuse; *peduncle* very long, rough; *glume* all white; *locustæ* green and purple.

β. *vivipara.* *Flowers* viviparous.

2. *Poa maritima.* *Sea meadow-grass.*

Panicle equal, branchy, or rather spreading, becoming contracted; *locustæ* 5 to 12-flowered, roundish; *flowrets* distant, obtuse, obsoletely 5-ribbed; *culm* ascending; *root* creeping.

Gramen pratense q. Gramen paniculatum maritimum vulgatissimum, *Raii Syn.* 409, 6.
Poa arundinacea, *Mœnch Meth.* 186.
Poa maritima, *Hudson Fl. Angl.* 42.

Sandy shores; perennial; July.

Culm decumbent at bottom, 1 foot high, very smooth, round, leafy; *leaves* involute, glaucous; *ligula* obtuse; *panicle* erect; *peduncles* slightly flexuous, first spreading, then erect becoming divaricated; *locustæ* purplish.

3. *Poa distans.* *Loose-flowered meadowgrass.*

Panicle equal, becoming divaricated; fruit-bearing branches deflexed; *locustæ* 4 to 6-flowered, roundish; *flowrets* distant, very obtuse, obsoletely 5-ribbed; *culm* ascending; *root* fibrous.

Aira aquatica β, *Hudson Fl. Angl.* 34.
Poa salina? *Pollich.* vi. 89.
Poa retroflexa, *Curt. Lond.* 6, 1.
Poa distans, *Lin. Mant.* 32.
Reflexed meadow-grass.

Sandy fields near the sea; perennial; July.

Culms many, 18 inches high, leafy, smooth; *leaves* longly sheathed, smooth, flat; *radical leaves* slightly involute; *ligula* obtuse; *panicle* erect; *locusta* green, or green and purple; *lower spathelle* 1-ribbed; *upper* 3-ribbed.

β. *glauca.* *Glaucous*, very stiff.

Salt marshes.

b. *Locustæ pubescent; ligula truncated, or nearly wanting.*

4. *Poa nemoralis.* *Grove meadow-grass.*

Panicle long, few-flowered, drooping; *locustæ* 2 or 3-flowered, pale, ovate, small, as long as the glumes; *glumes* acute; *glumelles* acute, free, subvenose; *leaves* flat, plaited at bottom; *culm* weak.

Poa nemoralis, *Lin. S. P.* 102.
Poa angustifolia β, *Huds. Fl. Angl.* 41.
Poa nemoralis vulgaris, *Gaudin Agr. Helv.* 179.

Woods; perennial; June.

Root slightly creeping, tufted; *culm* light green, 18 in. long, slender, smooth; *leaves* flat, slender, base pleated; *sheaths* shortish, smooth; *panicle* slender; *peduncles* in pairs or threes; *locustæ* green; *spathelles* nearly equal, very acute, 3-ribbed.

5. *Poa firmula.* *Stiffish meadow-grass.*

Panicle pyramidical, many-flowered, erect; *locustæ* 2 or 3-flowered, slightly coloured, ovate, longer than the glumes; *glumes* acute; *glumelles* acute, free, subvenose; *leaves* flat, plaited at bottom; *culm* firm.

Poa nemoralis β, *Smith Flor. Brit.* 106.
Poa angustifolia α, *Huds. Fl. Angl.* 40.
Poa pratensis 2, *With. Bot. Arr.* 142.
Poa nemoralis, *Vill. Delph.* 2, 129.
Poa nemoralis firmula, *Gaud. Agr. Helv.* 181.

Woods; perennial; June, July.

Culm erect, 2 feet high, naked above; *panicle* spreading; *peduncles* nearly verticillate, branchy, naked below.

6. *Poa glauca.* *Seagreen meadow-grass.*

Panicle spikeshaped, straight, few-flowered; *locustæ* 2 or 3-flowered, coloured, much longer than the glumes; *glumes* acute; *glumelles* obtuse, villose; *leaves* flat, plaited at bottom; *culm* stiff, in bundles.

Poa glauca, *Smith Flor. Brit.* 1388.
Poa nemoralis glauca, *Gaud. Agr. Helv.* 182.

Mountains; perennial; June, July.

Root tufted; *culms* many, 2 feet high, smooth, leafy below, compressed; *leaves* flat, slender; *sheath* almost as long as the leaves; *ligula* very short, crenate; *panicle* almost 1-sided; *peduncles* short, 1 to 2-flowered, adpressed, in pairs or threes; *locustæ* ovate, small, violet, scarcely ribbed.

7. *Poa cæsia.* *Gray meadow-grass.*

Panicle pyramidical, many-flowered; *locustæ* 4 or 5-flowered, elliptical, acute, coloured, larger than the glumes; *glumes* acute; *glumelles* constricted or free; *leaves* and *culm* glaucous.

Poa cæsia, *Smith Fl. Brit.* 103.
Poa glauca, *Poiret Ench. Meth.* 5, 78.
Poa nemoralis cæsia, *Gaud. Agr. Helv.* 184.

Mountains; perennial; June, July.

Root fibrous, tufted; *herb* glaucous; *culm* 1 foot high, erect, round, striated, above naked; *leaves* flat; *sheath* round, keeled; *ligula* short, lanceolate, torn; *panicle* erect, diffused; *peduncles* nearly verticillate, branchy; *locustæ* ovate, erect, glaucous, and purple.

c. *Locustæ pubescent; glumelles free at bottom.*

8. *Poa annua.* *Annual meadow-grass.*

Panicle 1-sided; *peduncles* in pairs, divaricated; *locustæ* oblong, ovate, 5 to 7-flowered; *ligulæ* short, obtuse; *culm* oblique, slightly compressed; *root* fibrous, annual.

Gramen pratense minus seu vulgatissimum, *Raii Syn.* 408.
Gramen pratense minimum album et rubrum, *Park.* 1156.
Poa annua, *Lin. S. P.* 99.

Fields, pastures, and roadsides; annual; all the year.

Culm ascending, 9 in. long, leafy; *leaves* 2-rowed, spreading, flat, flaccid, obtuse; *sheaths* light green, compressed; *panicle* erect, smooth; *peduncles* slightly branched; *locustæ* compressed, white and green, with short footstalks; *spathelles* carinate, acute, edge scariose, upper 3-ribbed, lower 1-ribbed; *outer spathellule* 5-ribbed, obtuse, edge scariose.

β. *rubra.* *Locustæ* variegated with purple, white, and green.

γ. *vivipara.* *Panicle* viviparous.

δ. *crispa.* *Leaves* transversely crisp and waved.

9. *Poa alpina.* *Alpine meadow-grass.*

Panicle equal, diffused; *peduncles* in pairs, many-flowered; *locustæ* ovate, 5 or 6-flowered; *lower ligulæ* truncated, very short; *upper* lanceolate; *culm* round, ascending, shining; *root* fibrous, perennial.

Poa pratense β, *Huds. Fl. Angl.* 39.
Poa brizoides, *Wohlenb. Suppl.* 5.
Poa Alpina, *Lin. S P.* 99.
Poa Badensis, *Willd. Sp. Pl.* 92.
Poa glomerata, *Knapp Gram.*

Alpine meadows; perennial; July.

Culm 18 in. high, erect, with 2 or 3 knots, naked above, purple; *radical leaves* many, spreading, flat, glaucous beneath, obtuse; sheaths short; *stem leaves* 2 or 3, short; sheaths very long; *panicle* broad, short, roundish; *locustæ* compressed, green, violet, and yellow; *lower spathelle* 3-ribbed; *outer spathellule* obsoletely 5-ribbed, acute; edge scariose.

β. *vivipara.* *Spikelet* vegetating.

Poa vivipara, *Lin. S. P.* 99.

γ.? *glomerata.* *Tall; leaves* long, flaccid; *panicle* clustered, many-flowered; *locustæ* pubescent.

d. *Glumelle connected at the base with wool; culm bulbose at the base.*

10. *Poa bulbosa.* *Bulbose meadow-grass.*

Panicle ovate, almost 1-sided; *peduncles* mostly in pairs; *locustæ* ovate, lanceolate, turgid, 4 or 5-flowered; *ligula* elongated, acute; *culm* bulbose at bottom.

Poa bulbosa, *Lin. S. P.* 102, α et γ.

Sandy fields and pastures near the sea; peren.; Apr. May.

Root fibrous; *culm* 12 in. high, erect, smooth, round; *leaves* short, flat; radical very slender, convolute; uppermost very short; *sheaths* very long, smooth, angular; *panicles* slender, spreading before flowering, and afterwards contracted; *peduncles* usually in pairs, rarely solitary or ternate; *locustæ* glaucous, purple and white, large.

? β. *vivipara.* *Viviparous*, panicle large; *sheaths* roughish.

Poa crispa, *Thuil. Paris.* 45.
Poa prolifera, *Schmidt in Mayer Phys. Sam.* 1, 188.

May, June.

e. *Locustæ pubescent; glumes connected at the base with wool; peduncles in pairs; culm not bulbose.*

11. *Poa laxa.* *Loose meadow-grass.*

Panicle subracemose; apex drooping, flexuous; *peduncles* few-flowered; *locustæ* broad, ovate, pubescent, 2 or 3-flowered; *spathelles* free or connected; *ligula* long, acute; *culm* erect, compressed; *root* fibrous.

Poa laxa, *Willd. S. Pl.* 1, 386.
Poa flexuosa, *Smith Flor. Brit.* 99.
Poa elegans, *De Cand. Fl. Fr.* 1615.

Alpine mountains; perennial; July.

Root tufted; *culm* many, smooth, 6 in. high, slightly glaucous; *leaves* flat, slender, acute; *sheaths* long, dilated below, very smooth, coloured; *panicle* contracted; *locustæ* broad, oval, green, white, and violet; *glumes* nearly as long as the flowrets.

β. *vivipara.* *Flowrets* viviparous; *locustæ* 2-flowered.

12. *Poa compressa.* *Squeezed meadow-grass.*

Panicle contracted, 1-sided; *peduncles* many-flowered, *ligula* short, very obtuse; *locustæ* lanceolate, 3 to 9-flowered, pubescent; *spathelles* connected; *culm* ascending, compressed; *root* creeping.

Gramen pratense paniculatum medium Tournefort, *Raii Syn.* 409, 5.
Poa compressa, *Lin. S. P.* 101.
Poa muralis, *Web. Werth.* 114.

Walls and dry pastures; perennial; July, August.

Root jointed; *culm* rooting, leafy, erect above, naked; *leaves* flat, short, rather glaucous; *sheaths* smooth, 2-edged; *ligula* exserted; *panicle* oblong; *peduncles* sometimes semi-verticillate, branchy, short; *locustæ* green and purple.

β. *erecta.* *Culm* erect; *panicle* large, very branchy.

Gardens.

f. *Locustæ pubescent. Glumelles connected with hairs at the base; peduncles mostly semiverticillate.*

13. *Poa trivialis.* *Wayside meadow-grass.*

Panicle pyramidical, diffuse; *locustæ* ovate, 3 to 4-flowered, black green; *glumelles* pubescent at bottom; *leaves* all flat, rough; *sheaths* and *culm* rough; *ligula* long, acute; *root* fibrous.

Gramen pratense paniculatum medium C. Bauhin, *Raii Syn.* 409, 2.
Poa trivialis, *Lin. S. P.* 99.
Poa pratensis, *Roth Germ.* 2, 1, 113.
Poa scabra, *Koel. Gram.* 161; *Chr. Gram.* 8, 72.
Poa dubia, *Leers Herb.* 28.

Fields and pastures; perennial; May, October.

Culm rooting at the base, decumbent, weak, 2 feet high; *leaves* erect, flat, flaccid; *sheaths* pale green; *panicle* large, erect, very spreading; *peduncles* many-flowered; *locustæ* small, rather obtuse.

14. *Poa setacea.* *Bristly meadow-grass.*

Panicle pyramidical, diffused; *locustæ* ovate, 2 or 3-flowered, dark green; *glumelles* pubescent at bottom; *lower leaves* involute, setaceous, rough; *culm* and *sheaths* rough; *ligula* long, acute; *root* fibrous.

Poa setacea, *Huds. Fl. Angl. ed.* 1, 34.
Poa trivialis; var. *Huds. ed.* 2, 210.

Dry sandy places; perennial; June, September.

Culms decumbent at bottom, 18 inches high, round; *leaves* not broader than the sheath; *sheaths* slightly compressed.

15. *Poa pratense.* *Field meadow-grass.*

Panicle pyramidical, very spreading; *locustæ* ovate, 3 or 4-flowered, variegated; *leaves* all flat, smooth, the upper much shorter than the sheaths; *sheaths* smooth; *ligula* abbreviated, truncated; *root* creeping.

Gramen pratense paniculatum majus latiore folio, *Raii Syn.* 409, 3.
Poa pratensis, *Lin. S. P.* 99.
Poa pratensis vulgaris, *Gaudin Agr. Helv.* 212.

Meadows; perennial; May and June.

Root creeping, shoot-bearing; *culm* erect, smooth, round, 2 feet high; *leaves* obtuse, spreading; *panicle* becoming divaricated; *locustæ* numerous, green and white.

16. *Poa angustifolia.* *Narrow-leaved meadow-grass.*

Panicle pyramidical, very spreading; *locustæ* ovate, 3 or 4-flowered, slightly coloured; *radical leaves* very long, slender, roughish; *culm* and *sheaths* smooth; *ligula* short, truncated; *root* creeping.

Poa angustifolia, *Lin. S. P.* 99.
Poa pratense angustifolia, *Gaud. Agr. Helv.* 214.
Poa pratense β, *Smith Flor. Brit.* 105.

Fields and meadows; perennial; May and June.

Culm erect, smooth, 18 inches high; *radical leaves* 2 or 3-bundled, flat, very slender, long; *stem leaves* short, broad, both light green; *panicle* becoming divaricated, smaller than poa pratensis; *spathelle* green, or green and white.

17. *Poa strigosa.* *Stiff meadow-grass.*

Panicle contracted, almost spike-shaped; *locustæ* ovate, 3-flowered, coloured; *leaves* slender, glaucous, becoming convolute; *sheath* and *culm* smooth; *ligula* short, truncated; *root* creeping.

Poa strigosa, *Hoff. Germ.* 111, 44.
Poa angustifolia, *Poinet Encl. Meth.* 5, 72.
Poa pratensis strigosa. *Gaud. Agros. Helv.* 214.

Dry sandy places; perennial; May, June.

Culm 3 feet high; *radical leaves* very slender, setaceous, involute; *culm* broad, involute, all glaucous; *panicle* strigose.

18. *Poa humilis.* *Dwarf meadow-grass.*

Panicle diffused; *locustæ* ovate, 3-flowered, glaucous; *leaves* flat, expanding, glaucous, smooth; *sheaths* and *culms* smooth, glaucous; *ligula* short, truncated; *root* creeping; *glumes* acute.

Poa humilis, *Ehr. Gram.* 115.
Poa subcærulea, *Eng. Bot.* 1004.
Poa cærulea, *Knapp.* 118.
Poa pratensis alpina, *Huds. Fl. Ang.* 39.
Poa alpina γ, *Willd. Sp. Pl.* 1, 386.

Mountainous pastures; perenial; June.

Plant glaucous, purple; *culm* 8 in. high, ascending, naked above; *leaves* short, straight; *sheaths* long, compressed; *locustæ* broad, ovate; *spathelles* green, apex purple; *glumelles* white, purple, and green.

XIV. 55. BRIZA. Greeks. *Cowquake.*

Spathelles alternate, boatshaped, compressed, cordate at bottom, rather eared, 3 to 12-flowered; flowrets 2-rowed, imbricate; *glumelles* awnless; *lower spathellute* cordate at bottom; *upper* almost orbicular, very short; *lodicule* ovate, lanceolate, not notched, smooth; *style* 2-parted; *stigmata* aspergilliform: *ovary* hemispherical, 2-beaked; *cariopsis* free, 2-beaked; beaks filiform, short; *panicle* compound; *peduncles* pendulous, very slender; *flowrets* hermaphrodite.

1. *Briza minor.* *Small cowquake.*

Panicle erect, base involuted in the upper leaves; *peduncles* rough; *locustæ* greenish, 3-angular, 5 to 7-flowered; *glumes* larger than the flowrets; *ligula* long, lanceolate.

Gramen tremulum minus, panicula ampla, locustis parvis triangulis, *Raii Syn.* 412, 2.
Briza minor, *Lin. S. P.* 102.
Briza aspera, *Knapp.* 61.

Fields; annual; July.

Root fibrous; *culm* erect, 9 in. high, round; base often branched; *leaves* erect, acute, flat, light green; *sheaths* smooth; *ligula* stem-clasping; *panicle* diffused; *peduncles* green; *locustæ* very numerous, green and white.

2. *Briza media.* *Middling cowquake.*

Panicle erect, base naked; *peduncles* smoothish; *locustæ* coloured, ovate becoming cordate, 7-flowered; *glumes* shorter than the flowrets; *ligula* very short, obtuse.

Gramen tremulum, *Raii Syn.* 412, 1.
Phalaris pratensis, *Ger. em.* 86.
Briza media, *Lin. S. P.* 103.
Quaking grass. Lady's hair. Shaker.

Fields and pastures; annual; May and June.

Root fibrous; *culm* erect, 1 foot high, naked above; *leaves* erect, acute, flat; *sheaths* very long; *ligula* obtuse; *panicle* diffused; *peduncles* brown; *locustæ* 10 to 30, ovate, smooth, white and brown.

β. *virens.* *Locustæ* green, small; *panicle* contracted.

3. *Briza maxima.* *Large cowquake.*

Panicle ramose, drooping; base naked; *locustæ* oblong, cordate; 15 to 17-flowered; *ligula* long, acute.

Phalaris pratensis altera, *Ger. em.* 87.
Briza maxima, *Lin. S. P.* 103.
Briza grandis, *Salisb. Prod.* 21.
Pearl-grass or Garden-shaker. Garden-quaker.

Dunghills; perennial; June. A doubtful native.

Culm 2 feet high, naked above; *leaves* soft, lax; *locustæ* 4 to 8, nearly an inch long.

XV. 56. MONILIA. Moench. *Singlejoint.*

Spathelles alternate, 2 or 3-flowered, shorter than the flowrets; *glumelles* awnless, lanceolate, acute; *lodicule* rather truncated; *style* 2-parted; *stigmata* aspergilliform; *cariopsis* bimucronate with the persisting vestiges of the styles, slightly furrowed, furrows broad; *panicle* compound; *locustæ* roundish; *culm* with only one joint at the base.

Monilia cærulea. *Blue singlejoint.*

Panicle long, contracted, equal; *locustæ* erect, oblong, cylindrical.

Gramen miliaceum q. Gramen pratense serotinum, panicula longa purpurescens, *Raii Syn.* 404, 8.
Gramen pratense spica lavendulæ, *Merret Pinax.*
Aira cærulea, *Lin. S. P.* 95.
Melica cærulea, *Lin. Mant.* 2, 325.
Monilia cærulea, *Moench in Kœl. Gram.* 145.
Festuca cærulea, *De Candolle Fl. Fr.* 1578.
Enodium cæruleum, *Persoon in Gaud. Agrost. Helv.* 145.
Monilia varia, *Schrank.*
Monilia variabilis, *Web. Werth.* 115.
Purple melic grass. Knotless grass.

Boggy barren meadows and pastures; peren.; June, July.

Root tufted; *culm* erect, 2 feet long, base thickened into a bulb, naked above; *leaves* stiff; *ligula* densely hairy; *panicle* erect; *locustæ* violet, smooth.

The culms are made into a neat sort of broom.

β. *sylvatica.* *Panicle* pale; *culm* 2 to 3 feet high.

γ. *multiflora.* *Locusta* 5 to 6-flowered.

XVI. 57. MELICA. Dodonæus. *Melick.*

Spathelles alternate, unequal, membranous, almost the length of the flowrets, 3 to 5-flowered; *upper flower* incomplete, abortive, pedicelled; *glumelles* awnless; *lodicle* truncated, fringed; *style* short, 2-parted; *stigmata* villose; *cariopsis* free, not furrowed; *panicle* few-flowered, compound or simple; *culm* angular.

1. *Melica uniflora.* *One-flowered melick.*

Panicle branchy, spreading, 1-sided; *locustæ* ovate, erect, long footstalked; *hermaphrodite flower* single; *culm* very smooth.

Gramen miliaceum q. Gramen avenaceum nemorense, glumis rarioribus ex fusco xerampelinis, *Raii Syn.* 403, 6.
Melica nutans, *Huds. Fl. Ang.* 37.
Melica uniflora, *Retz. Obs. Bot.* 1, 10.
Melica Lobelii, *Vill. Delph.* 2, 90.
Wood melick-grass.

Woods and hedges; perennial; May and June.

Culms 12 in. high, filiform, slender, very smooth, leafy, ascending; *leaves* flat, thin, light green; *sheaths* short; *ligula* very short, truncated; *panicle* irregular; *glumes* purple.

2. *Melica nutans.* *Drooping melick.*

Panicle scarcely branched, contracted, 1-rowed; *locustæ* ovate, pendulous; *hermaphrodite flowers* 2; *culm* rough above.

Gramen miliaceum q. Gramen avenaceum locustis rubris montanum, *Raii Syn.* 403, 7.
Gramen locustis rubris, *Park.* 1151.
Melica nutans, *Lin. S. P.* 98.
Melica montana, *Huds. Fl. Ang.* 37.
Aira nutans, *Willd. Prod.* 143.
Mountain melic-grass.

Mountainous woods; perennial; June, July.

Root creeping; *culm* erect; *leaves* erect, short; *ligula* very short, torn; *panicles* racemose, few-flowered; *glumes* scariose, white, edge purple.

XVII. 58. TRIODIA. R. Brown. *Three-cut.*

Spathelles alternate, 3 to 5-flowered, boatshaped, longer than the flowrets; *glumelles* 2-cut, toothed; *lower spathellule* toothed, with a mucro between the teeth; mucro thick, toothshape; *lodicle* lanceolate, not notched, smooth; *ovary* beaked; beaks 2-cut, diverging; *style* 2-parted; *stigmata* aspergilliform; *panicle* not branched, few-flowered.

Triodia decumbens. *Downlying three-cut.*

Panicle contracted; *locustæ* oblong, ovate, 3 or 4-flowered; *leaves* flat, pubescent.

Gramen avenaceum parvum procumbens, paniculis non aristatis, *Raii Syn.* 408, 11.
Festuca decumbens, *Lin. S. P.* 110.
Poa decumbens, *With. Bot. Arr.* 147.
Bromus decumbens, *Koel. Gram.* 242.
Melica decumbens, *Salisb. Prod.* 20.
Melica rigida, *Web. Werth.* 117.
Sieglingia decumbens, *Bern. Erf.* 44.
Danthonia decumbens, *De Cand. Fl. Fr.* 1543.
Triodia decumbens, *Pal. de Beauv.*

Mountainous fields and pastures; perennial; June.

Root fibrous, rather creeping; *culm* ascending, becoming upright, 9 in. high, smooth, bald; *ligula* very short, longly ciliated; *racemus* oblong; *locustæ* swelled, green, grey, and purple.

XVIII. 59. BRACHYPODIUM. Beauvois. *Shortfoot.*

Spathelles parallel, 3 to 15-flowered, shorter than the flowrets; *glumelles* not notched; *apex* of the lower spathellule ending in a bristle; *upper spathellule* obtuse, truncated, scarcely nicked, generally edged with stiff hair; *lodicule* ovate, not nicked, pilose; *ovary* obtuse; *stigmata* feathered; *cariopsis* slightly husked, furrowed; *rachis* jointed, spiked; *spike* notbranched; *locustæ* hermaphrodite, 2-rowed, alternate.

a. *Locustæ footstalked; footstalk broad, thick.*

1. *Brachypodium pinnatum.* *Featherlike shortfoot.*

Spike upright, 2-rowed; *locustæ* rather distant, becoming spread, pubescent, bristled; *bristle* shorter than the glumelle; *spathellules* blunt; *leaves* and *sheath* rather naked; *root* creeping.

Gramen spicâ brizæ majus, *Raii Syn.* 392.
Bromus pinnatus, *Lin. S. P.* 115.
Festuca pinnata, *Huds. Fl. Ang.* 48.
Avena læta, *Salisb. Prod.* 22.
Triticum pinnatum, *Moench Enum.* 102.
Triticum bromoides, *Web. Wirth.* 104.

Chalky fields and heaths; perennial; July.

Culm 2 feet high, jointed, slightly villose; *leaves* flat, rather stiff; *sheaths* smooth; *spathelles* acute; lower 5-ribbed; *spathellules* blunt.

β. *brevius.* *Bristle* as long as the glume.

γ. *pubescens.* *Locustæ* pubescent.

2. *Brachypodium sylvaticum.* *Wood shortfoot.*

Spike rather drooping, 2-rowed; *locustæ* villose, rather remote, upright, bristled; *bristles* short; upper longer than the glumelle; *spathellules* pointed; *leaves* pilose; *sheaths* pubescent.

Gramen avenaceum dumetorum spicatum, *Raii Syn.* 394.
Festuca pinnata β, *Huds. Fl. Ang.* 48.
Festuca gracilis, *Moench Meth.* 191.
Festuca sylvatica, *Huds. ed.* 1.
Bromus gracilis, *Weigel Obs.* 15.
Bromus pinnatus, *Fl. Dan.* 164.
Bromus dumosus, *Villars Delph.* 2, 119.
Bromus sylvaticus, *Pollich.* 1, 118.
Triticum sylvaticum, *De Cand. Syn. Fl. Fr.* 1665.
Triticum teretifolium, *Web. Werth.* 104. But all the synonymes are doubtful.

Woods, hedges, and fields; perennial; June.

Root fibrous, tufted; *culms* 3 feet high; knots very villose; *leaves* flat, long, soft; *ligula* short, obtuse; *locustæ* 6 or 9-flowered; *spathelles* acute, lower 5-ribbed; *spathellules* acute, outer 7-ribbed.

β. *pubescens.* *Locustæ* pubescent.

Bromus gracilis, *Willd. Sp. Pl.* 1, 458.
Festuca gracilis, *Koel. Gram.* 267.
Triticum gracile, *De Cand. Syn. Fl. Fr.* 1664.
Bromus sylvaticus β, *Gaud. Agr. Helv.* 281.
Festuca gracilis, β, *Schrad. Germ.* 1, 343.

b. *Locustæ sessile, facing one way.*

3. *Brachypodium loliaceum.* *Darnel shortfoot.*

Spike upright, not branched; rachis flexuose; *locustæ* smooth, oblong, blunt, awnless, facing one way; *glume* 3-ribbed, manyflowered; *root* fibrous; *culms* many, tufted.

Lolium q. Gramen pumilum loliaceo simile, *Raii Syn.* 395, 4.
Poa loliacea, *Huds. Fl. Angl.* 43.
Triticum unilaterale, *Aiton Hort. Kew.* 1, 122.
Triticum loliaceum, *Engl. Bot.* 221.
Triticum Rottbollia, *De Cand. Syn. Fl. Fr.* 1669.
Dwarf sea wheat-grass.

Sea-shore; annual; June and July.

Culm stiff, branchy, ascending, smooth, 3 in. high; *leaves* flat, becoming revolute; *sheaths* smooth; *ligula* short; *spike* stiff, in sunny places brownish.

4. *Brachypodium ramosum.* *Branched shortfoot.*

Spike branched at bottom; rachis compressed; *locustæ* oblong, smooth, blunt, awnless, facing one way; *glume* 3-ribbed, manyflowered; *root* fibrous.

Triticum maritimum, *Lin. S. P.* 128?
Triticum loliaceum; var. *Knapp Gram.* 114, 2.

Sandy shores near the sea.

Culm ascending, 9 in. high; *spike* 2 in. long; *branches* alternate.

XIX. 60. SCHEDONORUS. Beauvois. *Schedonorus.*

Spathelles parallel, 5 to 15-flowered, shorter than the flowrets; *glumelles* bristled; *lower spathellule* slightly notched below the apex, toothed; teeth often ending in a bristle; upper 2-cut, toothed; *lodicule* lanceolate, awlshape, not notched, smooth; *stigmata* villous; *cariopsis* rather husked, furrowed.—*Rachis* jointed, panicled; *panicle* racemose, branched; *pedicle* inflated, wedgeshape; *ligula* rather eared; *leaves* all flat.

1. *Schedonorus loliaceus.* *Darnel schedonorus.*

Panicle racemose, spiked, long, rather drooping; *locustæ* remote, becoming spreading; *root* fibrous.

Triticum patens, *Brot. Fl. Lus.*
Festuca loliacea, *Huds. Fl. Angl. ed.* 1, 38.
Festuca fluitans β, *Huds. Fl. Ang.* 47.
Festuca elongata, *Ehr. Beitr.* 133.
Poa loliacea, *Koel.* 207.

Moist pastures; perennial; June, July.

Culm 2 feet high, smooth; *leaves* flat; *ligula* exserted, blunt; *rachis* angular, rough; *spikelet* linear, oblong, roundish, becoming compressed, 2-rowed; *cariopsis* adpressed to the rachis, flat; *outer spathellule* 4 to 5-ribbed; *inner* 1-ribbed.

β. *compositus.* *Lower spikelets* in pairs.

2. *Schedonorus pratensis.* *Meadow schedonorus.*

Panicle spreading, branchy, rather upright, loose; *locustæ* linear, compressed, blunt; *root* fibrous.

Gramen pratense q. Gramen paniculatum elatius, spicis longis muticis, squamosis, *Raii Syn.* 411, 16.
Festuca pratensis, *Huds. Fl. Ang. ed.* 1, 37.
Festuca elatior, *Lin. Fl. Suec.* 32.
Festuca elatior 2, *With. Bot. Arr.*
Festuca fluitans γ, *Huds. Fl. Angl.* 47.
Bromus elatior, *Koel.* 214.
Poa curvata, *Koel.* 207.

Damp fields and meadows; perennial; June, July.

Culm ascending, 2 feet high; *leaves* pointed; *sheaths* streaked, very smooth; *ligula* short; *panicle* upright; branches mostly simple, rough; *locustæ* manyflowered; *outer glumes* 3-ribbed; *spathellules* scarcely ribbed.

3. *Schedonorus elatior.* *Tall schedonorus.*

Panicle rather diffuse, drooping, very much branched; *locustæ* ovate, lanceolate, acute; *flowrets* cylindrical, scarcely ribbed; *leaves* linear, lanceolate; *root* rather creeping.

Gramen pratense q. Gramen paniculatum nemorosum, latiore folio glabrum, panicula nutante non aristata, *Dillen in Raii Syn.* 411, 15.
Festuca elatior, *Lin. S. P.* 111.
Festuca arundinacea, *Schreb. Spicil.* 57.
Festuca spadicea, *Moench. Meth.* 190.
Bromus littoreus, *Willd. Sp. Pl.* 433.
Bromus arundinaceus, *Roth Germ.* 2, 141.
Avena secunda, *Salisb. Prod.* 21.

Damp fields; perennial; June, July.

Culm 4 feet high, smooth; *leaves* broad, ribbed, smooth; *panicle* becoming slightly erect; *locustæ* very numerous, ovate, acute, slightly flattened.

4. *Schedonorus sylvaticus.* *Wood schedonorus.*

Panicle facing one way, upright, very much branched, becoming contracted; *locustæ* oblong; *glumes* much shorter than the glumelles; *outer spathellule* 3-ribbed; *leaves* ensiform; *root* fibrous.

Festuca sylvatica, *Villars Dauph.* 2, 105.
Festuca calamaria, *Smith Fl. Brit.* 121.
Poa trinervata, *Koel Gram.* 171.
Poa sylvatica, *Pollich* 1, 83.

Hilly woods; perennial; July.

Roots in tufts; *culm* erect, 3 feet high, very smooth; joints purple; *leaves* flat, upright; *sheaths* cylindrical, hairy; *ligula* very short; *panicle* small, manyflowered; *locustæ* small, whitish green or purplish.

5. *Schedonorus deciduus.* *Falling schedonorus.*

Panicle facing one way, erect, very much branched, becoming contracted; *locustæ* 2 or 3-flowered, oblong; *outer spathellule* 3-ribbed; *leaves* linear, streaked.

Festuca decidua, *Eng. Bot.* 32, 2266.

Mountain woods; perennial; August.

Plant small and slender; *leaves* acute; *panicle* manyflowered; *locustæ* small, purplish; *upper flowrets* falling off.

XX. 61. ZERNA. Panzer. *Drank.*

Glumes 3 to 6-flowered, flowrets 2-rowed, imbricate; *spathelles* alternate, linear, lanceolate, acute; lower short, 1-ribbed; upper large, 5, 7, or 9-ribbed, tip bristled; *glumelle* bristled; *lower spathellule* linear, convolute, 3 to

9-ribbed, heartshape lobed at the tip; *bristle* straight, placed below the tip; upper short; *lodicule* ovate, not notched, smooth; *ovary* blunt; *stigmata* feathered; *cariopsis* husked, furrowed.—*Panicle* very much branched; branches semiverticillate, all one way; *locustæ* linear, lanceolate; *peduncles* rather wedgeshape.

Zerna erecta. *Upright drank.*

Panicle erect; *peduncles* simple, semiverticillate; *locustæ* upright, flattened; *flowrets* wedgeshape; *bristle* straight, shorter than the glume; *radical leaves* very slender, ciliate, pilose.

Bromus erectus, *Huds. Fl. Angl. ed.* 1, 39.
Bromus agrestis, *Allioni Pedem.* 2, 249.
Bromus perennis, *Vill. Delph.* 2, 122.
Bromus pseudo-arvensis, *Koel. Gram.* 241.
Bromus angustifolia, *Schrank Bavar.* 236.
Bromus arvensis, *Pollich Palat.* 113.
Bromus montanus, *Flor. Wetter.* 147.

Dry fields; perennial; May to September.

Roots in tufts; *culm* 3 feet high, erect, round; *radical leaves* very long; *stem leaves* broad, flat; *sheaths* long; *ligula* short; *panicle* contracted; *peduncles* upright, very unequal; *locustæ* 5 or 6-flowered.

2. *Zerna gigantea.* *Giant drank.*

Panicle drooping, loose; *peduncles* long, in pairs, facing one way; *locustæ* flattened, bald; *flowrets* imbricate; *bristles* flexuose, longer than the glume; *leaves* broad, bald.

Festuca avenacea q. Gramen avenaceum glabrum, panicula e spicis raris strigosis composita, aristis tenuissimis, *Raii Syn.* 415, 11.
Bromus giganteus, *Lin. S. P.* 114.
Festuca gigantea, *Vill. Dauph.* 2, 110.
Bromus aquaticus, *Gmel. Syst. Veg.* 1, 189.
Avena gigantea, *Salisb. Prod.* 22.
Schedonorus giganteus, *Gaud. Fl. Helv. MSS.*

Damp woods and hedges; perennial; July, August.

Root fibrous; *culm* 4 feet high, firm, smooth; *leaves* nging, swordshape, firm; *sheaths* bald; *ligula* short; *panicle* a foot long; *peduncles* in pairs; *locustæ* small, white and green, 4 to 7-flowered.

β. *triflorus.* *Plant* smaller; *panicle* drooping and spreading; *locustæ* 3 or 4-flowered.

Bromus triflorus, *Lin. S. P.* 115.
Festuca triflora, *Eng. Bot.* 1919.

Dry barren places.

3. *Zerna asper.* *Rough drank.*

Panicle drooping, loose; *peduncles* very long, in pairs, facing one way; *locustæ* compressed, pubescent; *flowrets* becoming remote; *bristle* straight, shorter than the glume; *leaves* villose, rough.

Festuca avenacea q. Gramen avenaceum dumetorum panicula sparsa, *Raii Syn.* 415, 10.
Bromus asper, *Lin. Suppl.* 111.
Bromus ramosus, *Lin. Syst. Veg. ed.* 13, 102.
Bromus nemoralis, *Huds. Fl. Ang.* 51.
Bromus hirsutus, *Curtis Fl. Lond.* 8.
Bromus nemorosus, *Vill. Dauph.* 2, 117.
Bromus altissimus, *Web. Holsat.* 94.
Bromus montanus, *Scop. Carn.* 117.
Schedonorus asper, *Gaud. Fl. Helv. MSS.*

Moist woods; annual or biennial; July.

Root fibrous, horizontal; *culm* firm, upright, 3 feet high; *knots* blackish; *hairs* short, deflexed; *leaves* flat, broad; *sheaths* rough; *ligula* short, torn; *locustæ* green, or green and purple, 7 or 9-flowered, hanging.

4. *Zerna sterilis.* *Barren drank.*

Panicle spreading, drooping at top; *peduncles* semiverticillate, mostly simple; *locustæ* oblong, rough; *flowrets* becoming remote; *bristle* straight, longer than the glume; *leaves* pubescent.

Festuca avenacea sterilis elatior, seu Bromos Dioscorides, *Raii Syn.* 412, 1.
Bromus sterilis, *Lin. S. P.* 113.
Bromus grandiflorus, *Weig. Obs.* 9.
Bromus distichus, *Moench Meth.* 192.
Avena sterilis, *Salisb. Prod.* 22.

Fields and hedges; annual; June and July.

Root fibrous; *culm* 3 feet high, upright, smooth; *leaves* flaccid, soft, hairy at bottom; *sheaths* pubescent, hairs deflexed; *ligula* short, blunt; *panicle* a foot long, loose; *locustæ* hanging, green.

5. *Zerna Madritensis.* *Madrid drank.*

Panicle upright, rather spreading; *peduncles* simple, in bundles; *locustæ* oblong, rough; *flowrets* becoming remote; *stamens* 2; *bristles* straight, not so long as the glume; *leaves* bald.

Festuca avenacea sterilis, paniculis confertis erectioribus, aristis brevioribus, *Raii Syn. ed.* 2, 261, *omitted in the 3d edition.*
Bromus Madritensis, *Lin. S. P.* 114.
Festuca Madritensis, *Desfort. Atlant.* 1, 91.
Bromus diandrus, *Curtis Fl. Lond.* 6, 5.
Bromus gynandrus, *Roth Cat.* 1, 15.
Bromus muralis, *Hudson Fl. Angl.* 50.
Bromus ciliatus, *Hudson ed.* 1, 40.

Sandy places, sides of walls; annual; June.

Root fibrous; *culm* 1 foot high, upright, slender, leafy; *sheaths* rather keeled; *ligula* short; *peduncle* 3 inches long, upright, bundled; *branches* 3 to 6, mostly simple, one-flowered, upright; *locustæ* upright, brownish.

β. *triandra*. *Stamens* 3.

XXI. 62. BROMUS. Theophrastus. *Brome.*

Glumes manyflowered; *flowrets* crowded, imbricate, much shorter than the glumelles; *spathelles* alternate, oval, lanceolate; lower 5-ribbed; upper many-ribbed, bristled; *glumelles* awned; *lower spathellule*, ovate, 5 to 9-ribbed, apex cordately lobed, awn straight below the tip; upper flat oblong; *lodicule* ovate, not notched, smooth; *ovary* obtuse; *stigmata* feathered; *cariopsis* husked, furrowed.—*Panicle* compound; *locustæ* ovate.

1. *Bromus arvensis.* *Field brome.*

Panicle spreading, drooping, compound; *peduncles* branched, long; *locustæ* lanceolate, acute; *spathellules* elliptical, imbricate, depressed, smoothish, with 2 close ribs on each side; *awn* straight, shorter than the flowrets; *leaves* slightly downy.

Festuca avenacea q. Festuca elatior, paniculis minus sparsis, locustis oblongis strigosis, aristis purpureis splendentibus Doody, *Raii Syn.* 414, 9.
Bromus arvensis, *Lin. S. P.* 113.
Avena arvensis, *Salisb. Prodr.* 23.
Bromus versicolor, *Pollich Palat.* 109.
Bromus spicula tenuata, *Knapp Gram.* 81.
Bromus leptostachyos, *Hull Brit. Fl. ed.* 2, 32.

Corn-fields; annual; August.

Root fibrous; *culm* 3 feet high, upright; *leaves* spreading; *peduncles* first upright, afterward drooping, with 6 to 12 locustæ; lower bracteate; *bracteæ* 2, falling off.

2. *Bromus pratensis.* *Meadow brome.*

Panicle spreading, rather erect, branched; *peduncles* long, scarcely branched; *locustæ* ovate, turgid; *spathellules* elliptical, broad, imbricate, smoothish, with 3 equidistant ribs on each side; *awn* as long as the flowret; *leaves* pilose; *lower sheath* tomentose.

Bromus pratensis, *Ehrh. Calam.* 116.
Bromus arvensis, *Engl. Bot.* 920.
Bromus elongatus, *Gaud. Agrost. Helv.* 305.

Fields; annual; June.

Culm 2 feet high; panicle small, upright.

3. *Bromus secalinus.* *Rye brome.*

Panicle lax, drooping; *peduncles* semiverticillate, not branched; *locustæ* oblong, ovate, compressed, bald; *flowrets* turgid, becoming distinctly remote; *awn* flexuose, shorter than the flowret; *sheaths* smooth; *leaves* rather hairy on their upper face.

Festuca avenacea spicis habitioribus, glumis glabris, *Raii Syn.* 414, 8.
Bromus secalinus, *Lin. S. P.* 112.
Bromus polymorphus γ, *Huds. Fl. Angl.* 49.
Bromus vitiosus, *Weigel Obs.* 4, 1.
Avena secalina, *Salisb. Prod.* 22.

Corn-fields; annual; July.

Culm 3 feet high, smooth; *leaves* long, broad, eared at bottom, plaited; *sheaths* angular; upper always bald; *ligula* short; *panicle* 6 in. long, erect at first; *locustæ* large, smooth.

4. *Bromus multiflorus.* *Many flowered brome.*

Panicle spreading, drooping; *peduncles* scarcely branched, stiff, semiverticillate; *locustæ* ovate, lanceolate, ventricose, pubescent, becoming distant; *flowrets* depressed; *awn* straight, pubescent, nearly as long as the glume.

Festuca avenacea, q. Festuca graminea glumis hirsutis et glabris C. Bauhin, *Raii Syn.* 414, 8.
Bromus secalinus 2, *Lin. Fl. Suec.* 96.
Bromus secalinus, *Leers Herb.* 36.
Bromus multiflorus, *Weigel Obs.* 2.
Bromus grossus, *Desfont.*
Bromus velutinus, *Schrader Germ.* 1, 349.

Fields; annual; July.

Culm upright, smooth, shining; *panicle* 9 in. long, at first upright, afterwards drooping; *peduncles* very unequal; *locustæ* ovate, 10 or 12-flowered.

5. *Bromus mollis.* *Soft brome.*

Panicle upright, contracted; *peduncles* branchy, semiverticillate; *locustæ* ovate, oblong, rather compressed, pubescent; *flowrets* imbricate, depressed; *awn* straight, as long as the glumelles; *leaves* soft, pubescent.

Festuca avenacea hirsuta, paniculis minus sparsis, *Raii Syn.* 413, 5.
Bromus mollis, *Lin. S. P.* 112.
Bromus polymorphus α, *Huds. Fl. Angl.* 48.
Bromus hordeaceus, *Lin. Sp. ed.* 1, 77.
Avena mollis, *Salisb. Prod.* 23.
Lobgrass. Oatgrass.

Meadows and pastures; perennial; July.

Root fibrous; *culm* 2 feet high, upright; *leaves* acute, dark green; *sheaths* pale; *lower ligula* obtuse, *panicle* ovate; *peduncles* 2 or 4-flowered; *locustæ* upright.

β. *nanus.* *Culm* 2 in. high; *panicle* fewflowered.
Bromus nanus, *Weigel Obs.* 8.

6. *Bromus racemosus.* *Bunched brome.*
Panicle upright, diffuse; *peduncles* not branched, semiverticillate; *locustæ* ovate, oblong, rather compressed, bald; *flowrets* imbricate, depressed; *awn* straight, as long as the glumelles; *leaves* scarcely pubescent.
Festuca avenacea spicis strigosioribus, e glumis glabris compactis, *Raii Syn.* 414, 7.
Festuca avenacea, q. Gramen avenaceum pratense, gluma tenuiore glabra Bobarti, *Raii Syn.* 414, 6.
Bromus racemosus, *Lin. S. P.* 114.
Bromus polymorphus β et δ, *Huds. Fl. Angl.* 49.
Fields and pastures; annual; June.
Culm slender, smooth; *leaves* pilose; *sheaths* hirsute; *panicle* not branched; *peduncles* long, not branched; *locustæ* shining, white and green.

7. *Bromus squarrosus.* *Scurfy brome.*
Panicle loose, not branched, nearly facing one way, drooping at top; *peduncles* not branched, in pairs; *locustæ* ovate, lanceolate, rather compressed, very smooth; *flowrets* imbricate, depressed; *awn* becoming divaricated; *leaves* pubescent.
Bromus squarrosus, *Lin. S. P.* 112.
Fields; annual; July. A doubtful native.
Roots fibrous; *culm* 18 in. high, upright, smooth; *leaves* and *sheaths* pubescent; *panicle* rather racemose; *locustæ* very large, shining.

XXII. 63. FESTUCA. *Fescue.*

Glume 2 to 15-flowered; *spathelles* parallel, nearly equal; *lower* many-ribbed; *glumelles* bristled; *lower spathellule* not notched, ending in a seta shorter than the glumelle; *upper* 2-cut, toothed; *lodicule* ovate, not notched, hairy; *stamens* 3; *stigmata* villose; *cariopsis* mostly husked, furrowed.—*Rachis* jointed, panicled; *panicle* branchy, facing one way; *pedicels* inflated, wedgeshape.

a. *Ligula very short, truncated, 2-eared; leaves all bristlelike; culm 4-angular.*

1. *Festuca ovina.* *Sheeps fescue.*
Panicle spreading, becoming contracted; *locustæ* ovate, 4 or 5-flowered, bristled; *spathellules* roundish, smooth at bottom, inner margin very smooth; *leaves* setaceous, rough.

Festuca ovina, *Lin. S. P.* 108.
Avena ovina, *Salisb. Prod.* 22.

Meadows and hills; perennial; June.

Root fibrous, in tufts; *radical leaves* many, upright, glaucous; *stem-leaves* few, short; *sheaths* very long; *culm* 8 in. high; *panicle* spikeshape; *peduncles* solitary; *locustæ* very small.

2. *Festuca tenuifolia.* *Fineleaved fescue.*

Panicle facing one way, spreading, becoming contracted; *locustæ* ovate, 4 or 5-flowered, awnless, rough; *spathellules* roundish, upper edge very smooth; *leaves* hairlike, flaccid, rough.

Gramen pratense q. Gramen capillaceum locustellis pennatis non aristatis, *Raii Syn.* 410, 9.
Festuca tenuifolia, *Sibthorp.* 44.
Festuca ovina β, *Leers Herb.* 33.

Meadows; perennial; June.

3. *Festuca vivipara.* *Childing fescue.*

Panicle contracted; *locustæ* ovate, lanceolate, pubescent; *flowrets* compressed, keeled, awnless, pubescent; *inner margin* of the spathellules pubescent; *culm* rather naked; *leaves* very slender, smooth.

Gramen pratense q. Gramen sparteum montanum spica foliacea graminea majus et minus How. *Raii Syn.* 410, 11.
Festuca ovina β, *Lin. S. P.* 108.
Festuca vivipara, *Smith Fl. Brit.* 114.

Alpine mountains; perennial; July.

Root fibrous, in tufts; *leaves* recurved, angular, light green; *panicle* short, scarcely branched, upright; *locustæ* green; *glume* and *glumelle* changing into leaves.

4. *Festuca violacea.* *Violet fescue.*

Panicle branched, slightly spreading; *locustæ* oblong, smoothish, bristled; *leaves* hairlike, soft; *stem-leaves* very short, doubled, capillary; *culm* threadlike.

Festuca rubra, *With. Bot. Arr.* 202.?
Festuca violacea, *Gaud. Agr. Helv.* 231.
Festuca ovina β, *Smith Fl. Br.* 113.

Meadows and hills; perennial; June.

Root in tufts; *culm* very smooth, 4 in. high; *leaves* light green; *stem-leaves* 2 or 3; *sheaths* very long, smooth; *panicle* oblong; *peduncles* in pairs, violet; *locustæ* violet.

5. *Festuca cæsia.* *Grey fescue.*

Panicle contracted, glaucous; *locustæ* roughish, bristled; *flowrets* cylindrical; margin of the inner spathellule pubescent; *leaves* compressed, channelled; *ligula* minute; *root* fibrous.

Festuca cæsia, *Engl. Bot.* 1917.

Dry barren heaths; perennial; June.

Roots in tufts; *culm* 9 in. high; naked above, sides convex; *leaves* narrow, carinate, smooth, channelled; *panicle* ovate, very glaucous, tinged with purple; *flowrets* 4 or 5, round; *awn* straight; *glumelle* downy at the edge.

b. *Ligula very short, truncated, 2-eared; radical leaves bristlelike; stem leaves flat, broad; culm round.*

6. *Festuca rubra.* *Red fescue.*

Panicle facing one way, spreading, erect; *locustæ* oblong, elliptical, smooth, bristled, reddish; *bristle* long; *leaves* glaucous, stem-leaves woolly above; *root* creeping.

Festuca rubra, *Lin. S. P.* 109.

Alps and sea-coasts; perennial; July.

Root creeping, jointed; *radical leaves* glaucous, upright, smooth, stiff, bristlelike, angular; *stem-leaves* broader, closely villose above; *culm* smooth; *locustæ* purplish.

β. *vivipara.* *Spikelet* viviparous.

7. *Festuca glauca.* *Seagreen fescue.*

Panicle compact, becoming loose and spreading, glaucous; *locustæ* oblong, elliptical, 7 to 20-flowered, bristled; *bristle* short; *leaves* seagreen; *culm* stiff; *root* creeping.

Festuca glauca, *Winch Bot. Guide*, 2, 1102, not of Lamarck.

Loose sands of the sea; perennial; June.

Root creeping; *leaves* narrow, involute, acute, in tufts; *culm* reedlike, 12 in. high.

8. *Festuca Cambrica.* *Welsh fescue.*

Panicle oblong, upright, branched; *locustæ* ovate, smooth, bristled; *leaves* glaucous; *stem-leaves* smooth; *roots* fibrous.

Festuca Cambrica, *Huds. Fl. Angl.* 45.
Festuca rubra β, *Smith Fl. Br.* 116.

Mountains of Wales; perennial; May, June.

Root fibrous; *culm* 9 in. high, cylindrical, smooth; *radical leaves* upright, channeled, acute; *stem-leaves* 2 or 3, acute, smooth; *locustæ* 6 or 7-flowered.

β. *glabra.* *Locustæ* 3-flowered.
Festuca glabra, *Lightf. Fl. Scot.* 1085.
Festuca rubra γ, *Smith Fl. Brit.* 116.

9. *Festuca duriuscula.* *Stiff fescue.*
Panicle facing one way, upright, spreading; *locustæ* lanceolate, smoothish, bristled; *leaves* stiff, bristlelike, seagreen; *root* fibrous.
Festuca avenacea q. Gramen pratense panicula duriore laxa, unam partem spectantia, *Raii Syn.* 413, 4.
Festuca duriuscula, *Lin. S. P.* 108.
Festuca dura, *Host Gram. Austr.* 2, 87.
Festuca duriuscula lævigata, *Gaudin Agr. Helv.* 251.
Dry pastures; perennial; June.
Roots in tufts; *radical leaves* many, hard, smoothish; *stem-leaves* flat, stiff, short; *sheaths* smooth; *ligula* short, brown; *panicle* oblong, broad, green and white; *peduncles* single.

10. *Festuca dumetorum.* *Hedge fescue.*
Panicle upright, spikeshape, facing one way; *locustæ* pubescent, bristled; *bristle* shorter than the glumelle; *leaves* threadlike, seagreen; *root* fibrous.
Festuca dumetorum, *Lin. S. P.* 109.
Festuca duriuscula, var. *Huds. Fl. Ang.* 45.
Dry pastures; perennial; June.
Roots in tufts; *leaves* many; *stem-leaves* slender, flattish, rather stiff; *panicle* slender; *locustæ* smaller than festuca duriuscula; *glumelle* entirely pubescent.

XXIII. 64. VULPIA. Gmelin. *Capons-tail.*

Glumes 4, 6, or 8-flowered; *spathelles* parallel, very unequal; *inner* 3 or 4 times shorter than the outer; *glumelle* bristled; *lower spathellule* ending in a bristle longer than the glumelle; *upper* 2-cut, toothed; *lodicule* ovate, entire, hairy; *stamen* 1; *stigmata* villose; *cariopsis* rather husked, furrowed.—*Rachis* jointed; *panicle* racemose, facing one way; *pedicels* inflated, wedgeshape; *leaves* bristlelike.

1. *Vulpia murorum.* *Wall capons-tail.*
Panicle long, rather contracted, drooping, spiked, many-flowered; *locustæ* smoothish; *inner spathelle* half the length of the outer; *culm* inclosed in a sheath nearly to the panicle; *ligula* short, 2-eared.
Festuca avenacea q. Gramen murorum spica longissima, *Ger. em.* 29. *Raii Syn.* 415, 12.
Festuca myurus, *Lin. S. P.* 109.
Vulpia myurus, *Gmel. Fl. Bad.* 1, 8.

Walls and barren places; biennial; May to September.

Root fibrous, in tufts; *culms* many, 12 in. high, upright, very smooth; *radical leaves* none; *stem-leaves* 3 to 6, short; *sheaths* bellied above, inclosing part of the panicle; *ligula* white; *panicle* 6 in. long, pale green; *lower peduncle* many-flowered.

2. *Vulpia bromoides.* *Bromelike capons-tail.*

Panicle short, spikeshape, fewflowered, upright; *locustæ* smoothish; *inner spathelle* half the length of the outer; *culm* naked above; *ligula* scarcely visible.

Festuca bromoides, *Lin. S. P.* 110.
Bromus Derloniensis, *Allioni Ped.* 2, 2225.
Bromus ambiguus, *Cyrilli.*

Walls and barren places; biennial; May to September.

Culm 6 in. high, usually branched at bottom; *leaves* bristlelike, short; *ligula* brown; *panicle* 3 to 9-flowered; *peduncle* 1-flowered; *margin* of the inner spathellule pubescent.

β. *sciuroides.* *Culm* very high.
Festuca sciuroides, *Roth Germ.* 1, 46, et 2, 130.

3. *Vulpia maritima.* *Sea capons-tail.*

Panicle scarcely branched, spikeshape, upright, fewflowered; *locustæ* smooth; *inner spathelle* very minute, scarcely perceptible; *ligula* short, obtuse.

Festuca avenacea sterilis humillima spica unam partem spectante, *Raii Syn.* 413, 3.
Lolium bromoides, *Hud. Fl. Ang.* 55.
Stipa pennata, *Lin. Sp. P.* 116.
Festuca uniglumis, *Solander in Aiton H. Kew.* 1, 108.

Sandy sea-shores; biennial; June.

Root fibrous; *culms* angular, many, branched, leafy, 6 in. high; *leaves* subinvolute, smooth; *sheaths* long, smooth; *panicle* 12 in. long; *locustæ* upright.

XXIV. 65. GLYCERIA. R. Brown. *Manna-grass.*

Glume 5 to 7-flowered; *spathelles* parallel, truncated, shorter than the locustæ; edge membranous, transparent; *lower spathellule* torn, manytoothed, boatshape; *upper* 2-toothed, embracing; *lodicule* almost connate, cordate; *stigmata* feathered; *cariopsis* fewfurrowed.—*Rachis* panicled; *panicle* scarcely branched, facing one way.

Glyceria fluitans. *Floating manna-grass.*

Panicle spread out, facing one way; *locustæ* linear, round, compressed, adpressed; *spathellules* 7-ribbed; *root* creeping.

Gramen pratense q. Gramen aquaticum cum longissima panicula, *Raii Syn.* 412, 17,
Gramen fluviatile, *Ger. em.* 14; *Park.* 1275.
Festuca fluitans, *Lin. S. P.* 111.
Poa fluitans, *Salisb. Prod.* 219.
Desvauxia fluitans, *Palisot de Beauvois.*
Glyceria fluitans, *Brown Prod.*
Flote-grass.

Rivers and watery places; peren.; April to September.

Culm ascending, lower joints rooting; *leaves* flat, obtuse, broad; *lower leaves* floating; *sheaths* long; *ligula* deltoid, short; *panicle* long; *peduncles* solitary or in pairs, very spreading; *locustæ* blunt, green and white.

β. *terrestris.* *Panicle* scarcely branched, very small.

γ. *vivipara.* *Glume* and *glumelle* changed into leaves.

δ. *maritima.* *Leaves* glaucous, blunt, broad; *locustæ* 6 or 8-flowered.

XXV. 66. DACTYLIS. *Roughgrass.*

Glume 2 to 7-flowered; *spathelles* alternate, nearly equal, shorter than the flowrets; *glumelle* bristled; *lower spathellule* nicked below the tip, bristled; *upper* 2-cut, toothed; *lodicule* ovate, hairy; *stigmata* villose; *cariopsis* free, scarcely furrowed.—*Rachis* panicled; *panicle* branched; *peduncles* short; *locustæ* many, crowded into 1-sided heads.

Dactylis glomerata. *Balled roughgrass.*

Panicle very much branched; *peduncles* alternate, spreading; *leaves* carinate.

Gramen arundinaceum q. Gramen asperum, *Raii Syn.* 400, 2.
Dactylis glomerata, *Lin. S. P.* 105.
Bromus glomeratus, *Scop. Carn.* 111.
Festuca glomerata, *Vill. Dauph.* 2, 96.
Rough cocksfoot.

Fields and hedges; perennial; June to August.

Root fibrous, tufted; *culm* erect, 2 feet high, naked above; *leaves* acute, dark green; *sheaths* compressed; *ligula* long.

XXVI. 67. KOELERIA. Persoon. *Silver-grass.*

Glume 2 or 3-flowered; *spathelles* alternate, nearly as long as the flowrets; *glumelle* bristled; *lower spathellule* shining, pointed beneath the tip, edge scariose; bristle very short; *upper* 2-cut; *stigmata* rather plumose; feathers aspergilliform; *cariopsis* free.—*Rachis* panicled; *panicle* not branched; *peduncles* crowded; *locustæ* compressed, pubescent, nearly awnless.

Koeleria cristata. *Crested silver-grass.*

Panicle spikeshaped, base interrupted, smoothish; *locustæ* 2 or 3-flowered, very slightly bristled, very acute; *leaves* flat, the lowest ciliately pubescent; *culm* smooth below the panicle.

Gramen alopecuroides q. Gramen pumilum hirsutum spica purpuro-argentea molli, *Raii Syn.* 396, 3.
Aira cristata, *Lin. S. P.* 94.
Poa cristata, *With. Bot. Arr.* 145.
Festuca cristata, *Vill. Dauph.* 2, 93.
Kœleria cristata, *Persoon Syn.* 1, 97.

Barren pastures and walls; perennial; July and August.

Root fibrous, in tufts; *culm* upright, leafy at bottom; *leaves* green, shorter than the culm; *sheath* rough; *ligula* very short; *panicle* oblong; *peduncles* pubescent, short, in pairs; *locustæ* yellowish.

XXVII. 68. CYNOSURUS. Linnæus. *Dogs-tail.*

Glumes 4 or 5-flowered; *spathelles* alternate, shorter than the flowrets; *glumelle* awnless; *lower spathellule* very acute, upper 2-cut, toothed; *lodicule* ovate, not nicked, hairy; *stigmata* villose; *cariopsis* husked, furrowed.—*Rachis* spiked; *spike* branched; *locustæ* 2 in each involucrum; *involucrum* 1-leafed, lobed; *lobes* pinnatified.

Cynosurus cristatus. *Crested dogs-tail.*

Panicle linear; *leaves* linear.

Gramen vernum q. Gramen cristatum, *Raii Syn.* 398, 2.
Gramen cristatum Anglicum, *Park.* 1159.
Gramen cristatum Bauhini, *Ger. em.* 29.
Cynosurus cristatus, *Lin. S. P.* 105.
Phleum cristatum, *Scop. Carn.* 81.

Dry pastures; perennial; June to August.

Roots in tufts; *culm* erect, 1 foot high, very smooth; *leaves* narrow, smooth; *sheaths* round, quite smooth; *ligula* short; *spike* facing one way, 1 or 2 in. long.

β. *tetragonus.* *Spike* 4-rowed, 4-sided.

γ. *viviparous.* *Spike* viviparous.

XXVIII. 69. SESLERIA. Scopoli. *Moor-grass.*

Glume 3 or 4-flowered; *spathelles* alternate, shorter than the pedicelled flowrets; *glumelle* bristled; *lower spathellule* irregularly 2-toothed, bristled below the apex; *upper* 2-cut, toothed; *lodicule* ovate, longer than the ovary, subulate; *style* simple; *stigmata* very long, feathered.—*Rachis* spiked; *spike* branched, involucrated; *universal involucrum* manyleaved; leaflets sometimes falling off.

Sesleria cærulea. *Blue moor-grass.*

Spike ovate, oblong; *leaflets* of the involucrum alternate, not notched; *locustæ* 2 or 3-flowered; *bristle* of the spathellule shorter than the glumelle; *leaves* flat, obtuse.

Gramen vernum q. Gramen parvum montanum spica crassiore purpurocærulea brevi, *Raii Syn.* 399.
Cynosurus cæruleus, *Lin. S. P.* 106.
Sesleria cærulea, *Scop. Carn.* 1, 63.

Damp chalky soils; perennial; April and May.

Roots fibrous, in tufts; *culm* 12 in. high, upright, smooth; *leaves* bent back; *sheaths* short, pale, smooth; *ligula* scarcely visible; *spikes* upright, blue and brown, shining.

XXIX. 70. CHRYSURUS. Persoon. *Gold-tail.*

Spathelles alternate; *locustæ* dissimilar; NEUTER LOCUSTA (involucrum of Linnæus) manyflowered, *flowrets* distant; *spathelles* linear, awlshape; *spathellule* 1, barren; HERMAPHRODITE LOCUSTA 1-flowered; *spathelles* linear, awlshape; *flowrets* pedicelled; *lower spathellule* bristled, under the unnicked tip; *upper* spathellule not nicked; *lodicule* lanceolate; *ovary* nicked; *style* 2-parted; *stigmata* plumose; *cariopsis* 2-beaked, free, not furrowed.—*Rachis* panicled; *panicle* much branched.

Chrysurus echinatus. *Rough gold-tail.*

Panicle contracted, ovate; *barren locusta* scariose, longly bristled; *leaves* lanceolate.

Gramen alopecuroides spica aspera brevi, *Raii Syn.* 397, 5.
Cynosurus echinatus, *Lin. S. P.* 105.
Chrysurus echinatus, *Pal. de Beauvois.*
Rough-eared fox-tail.

Sandy grounds near the sea; annual; July.

Root fibrous; *culm* erect, branchy at bottom; *leaves* sharp-pointed, light green, flat; *sheaths* large, inflated; *ligula* long; *panicle* grey, growing silvery, shining.

β. *purpureus.* *Awn* purplish.

D. Arundinaceæ. *Rachis* panicled; *locustæ* single, manyflowered; *glumes* carinate; *glumelles* of nearly the same consistence as the glumes; *lower spathellule* concave, awlshape at top; bottom generally girt with hairs; *upper* 2-ribbed; *styles* 2.

XXX. 71. ARUNDO. Pliny. *Reed.*

Glumes 5 or 7-flowered; *spathelles* alternate, unequal, acute, shorter than the flowrets; *lower flowret* male or neuter; glumelles naked; *upper flowret* hermaphrodite; glumelles girt at bottom with wool: *lower spathellule* long awlshape; *upper* 2-cut, toothed; *lodicule* truncate, fringed; *stigmata* aspergilliform; *cariopsis* husked. — *Panicle* very much branched, loose.

Arundo vallatoria. *Bankside reed.*

Panicle loose; *locustæ* upright, 5-flowered; *leaves* and *sheaths* smooth; *root* creeping.

Arundo vallatoria, *Ger. em.* 32; *Raii Syn.* 401, 1.
Harundo vulgaris sive vallatoria, *Park.* 1202.
Arundo Phragmitis, *Lin. S. P.* 120.
Arundo palustris, *Salisb. Prod.* 24.

Watery places; perennial; July.

Culm annual, erect, 6 feet high; *leaves* spreading, glaucous underneath; *ligula* very short; *panicle* rather erect, purplish.

Panicles dye woollen green; *culm* forms a very durable skreen in gardens against the wind, and is also used as a foundation for plaster-floors; *the inner membrane* of the culm forms a very sensible hygrometer.

β. *variegata.* *Leaves* variegated.

E. Avenaceæ. *Rachis* panicled; *locustæ* fewflowered; *glumes* carinate; *glumelles* of the same consistence as the glumes; *lower spathellule* awned; awn kneed, twisted; *upper* 2-keeled; *styles* 2-cut.

XXXI. 72. TRISETUM. Persoon. *Threebristle.*

Glumes membranaceous, 3 to 5-flowered; *spathelles* alternate, nearly as long as the flowrets; *lower spathellule* 2-cut, toothed, back awned above the middle; *awn* herbaceous, flexuose, rarely plaited; *lodicule* lanceolate, not notched, bald; *style* 2-parted; *stigmata* plumose, nearly aspergilliform; *cariopsis* slightly husked, furrowed.—*Panicle* branched.

Trisetum flavescens. *Yellow threebristle.*

Panicle equally spreading, diffused, becoming contracted; *locustæ* 2 to 5-flowered, shining, yellowish; *lower leaves* pubescent; *ligula* scarcely visible; *outer spathellules* 5-ribbed; *root* rather creeping.

Gramen avenaceum pratense elatius, panicula flavescente, locustis parvis, *Raii Syn.* 407, 5.
Avena flavescens, *Lin. S. P.* 97.
Trisetum pratense, *Persoon Syn.* 1, 97.

Fields and pastures; perennial; June and July.

Culm upright, 2 feet high; *leaves* flat, acute; *sheaths* pubescent; *panicle* rather drooping, manyflowered; *peduncles* semiverticillate; *locustæ* spreading; *flowrets* longer than the glume.

β. *biflorum.* *Locustæ* 2-flowered.

XXXII. 73. DANTHONIA. R. Brown. *Haver.*

Glumes 2 to 5-flowered; *spathelles* alternate, nearly equal, longer than the flowrets; *lower spathellule* 2-toothed, awned between the teeth; awn plaited, twisted, tapewormshape; *upper* blunt, truncated, not nicked; *lodicule* ovate, not notched, bald; *stigmata* aspergilliform; *cariopsis* free, obtuse, scarcely furrowed.—*Panicle* not branched, facing one way.

Danthonia strigosa. *Rough haver.*

Panicle oblong, slender, loose; *locustæ* 2-flowered; *lower spathellule* streaked at the tip; *leaves* smooth.

Avena strigosa, *Schreber Lips.* 52.
Danthonia strigosa, *Pal. de Beauvois*, 92.

Corn fields; annual; July.

Root fibrous; *culm* 3 feet high, smooth; *leaves* flat, glaucous; *ligula* blunt; *panicle* upright, the tip drooping.

XXXIII. 74. AVENA. Pliny. *Oat.*

Glume membranaceous; *spathelles* alternate, nearly equal, longer than the flowrets; *glumelles* awned; *lower spathellule* 2-lobed or 2-cut, toothed, awned on the back; *awn* leathery, plaited, twisted; *upper spathellule* 2-cut, toothed, sometimes torn; *lodicule* ovate, not notched, bald; *stigmata* villose; *cariopsis* husked, furrowed. — *Panicle* branched, loose.

a. *Locustæ 2-flowered.*

1. *Avena sativa.* *Cultivated oat.*

Panicle loose; *locustæ* drooping, 2-fruited; *cariopsides* smooth, husked; *upper flowret* awnless.

Avena alba, *Raii Syn.* 389, 1.
Avena vesca, *Ger. em.* 68; *Park.* 1134.
Avena sativa, *Lin. S. P.*
White oats.

Cultivated in fields, principally in the northern parts; annual; June, July.

Culm 4 feet high; *glumelles* whitish.

Seeds used in the south for the food of horses, but in the north they are ground and the meal used either for bread, or for gruel: they are also malted for making an ale or a distilled spirit called whiskey: the ashes of the straw used to polish marble.

β. *nigra.* *Glumelles* blackish brown.

Avena nigra, *Raii Syn.* 389, 3.
Black oats.

γ. *mutica.* *Flowrets* all awnless.

Avena vesca, *Park.* 1134.

δ. *uniflora.* *Glumes* 1-flowered.

Avena alba Scotica, semine simplici, pediculo laxo pendente, *Raii Syn.* 389, 2.

2. *Avena orientalis.* *Eastern oats.*

Panicle facing one way, contracted; *locustæ* horizontal, parallel, 2-fruited; *cariopsides* husked, smooth; *uppermost flowret* awnless.

Avena orientalis, *Schreber Spic.* 52.

Occurs along with the former species, but rarely.

β. *mutica.* *Flowrets* all awnless.

b. *Locustæ 3 or more-flowered.*

3. *Avena nuda.* *Naked oat.*

Panicle contracted, slender; *locustæ* upright, 3-seeded; *cariopsides* smooth, free; *uppermost flowret* awnless.

Avena nuda, *Raii Syn.* 389, 6; *Ger. em.* 75; *Park.* 1134.
Pills. Pilcorn.

Cultivated in Cornwall, Staffordshire, and elsewhere; annual; July and August.

Glumelles yellow; *flowrets* very narrow.

4. *Avena fatua.* *Wild oat.*

Panicle equally branched, loose; *locustæ* drooping, 3 to 5-seeded; *cariopsides* husky, very hairy at bottom; *flowrets* all awned; *leaves* flat.

Avena q. Ægilops quibusdam aristis recurvis, seu Avena pilsoa, J. Bauhini, *Raii Syn.* 389, 7.
Ægilops bromoides, *Ger. em.* 77.
Ægilops bromoides Belgarum, *Park.* 1148.
Avena fatua, *Lin. S. P.* 118.
Bearded wild oats, or haver.

Fields and corn-fields; annual; August.

Root fibrous; *culm* upright, 4 feet high, naked above; *leaves* broad, rather upright, plaited; *sheaths* bald; *ligula* blunt; *panicle* upright; *peduncles* unequal; *pedicles* drooping; *locustæ* pendulous; *glumelles* yellow, growing black; *awns* brown.

β. *pilosissima.* *Glumelles* entirely covered with hair.

5. *Avena pubescens.* *Downy oat.*

Panicle upright, nearly simple; *locustæ* upright, long, 3-flowered; *cariopsides* husked; *partial rachis* bearded; *culm* simple; *leaves* all flat, pubescent.

Gramen avenaceum septimum seu glabrum (potius hirsutum) panicula purpuro-argentea splendente D. Doody, *Raii Syn.* 406, 2.
Avena pubescens, *Lin. S. P.* 1665.
Avena pratensis, *Gouan Hort.* 53.

Chalky fields and pastures; perennial; June.

Root fibrous, in tufts; *culm* 2 feet high, smooth, bald; *leaves* obtuse, uppermost smooth, bald; *lower ligula* very short; *upper* oblong, blunt; *panicle* oblong; *locustæ* large, becoming obovate, shining, silvery green.

β. *glabra.* *Leaves* smooth.

6. *Avena pratensis.* *Meadow oat.*

Panicle upright, spiked, long; *peduncles* single or in pairs; *locustæ* upright, 5 to 8-flowered; *cariopsides* husked; *partial rachis* hairy; *radical leaves*, involute, rough, bald; *upper* flat.

Gramen avenaceum montanum, spica simplici, aristis recurvis, *Raii Syn.* 405, 1.
Avena pratensis, *Lin. S. P.* 119.

Calcareous fields and pastures; perennial; July.

Root fibrous; *culms* many, 2 feet high, upright, simple, naked above; *radical leaves* linear, acute, stiff; *stem leaves* broad; *sheaths* very long; *ligulæ* lanceolate.

β. *bromoides.*

7. *Avena Alpina.* *Alpine oat.*

Spike upright; *panicle* nearly spikelike; *leaves* naked, finely serrulate; *sheaths* oblong, rough; *culm* compressed.

Avena planiculmis, *Eng. Bot.* 30, 2144.
Avena alpina, *Smith T. L. S.* 10, 335.
Trisetum alpinum, *Roemer Syst. Veg.* 663.
Gaudinia planiculmis, *Pal. de Beauvois*, 95.

Mountain rocks; perennial; July.

Root tufted; *culm* 3 feet high; *flowrets* very large; *rachis* hairy at the top; *locustæ* 3 to 5-flowered.

XXXIV. 75. ARRHENATHERUM. Beauv. *Dog-grass.*

Glumes membranous, 2-flowered; *spathelles* alternate, shorter than the flowrets: LOWER FLOWRET male; *lower spathellule* 2-lobed at the tip, lobes often torn-edged, ciliate; awned on the back below the middle; *upper* membranous, hyaline, 2-cut, toothed; *lodicule* lanceolate, not notched, smooth: UPPER FLOWRET hermaphrodite; *spathellules* 2-cut, toothed; *lower* awned above the middle of the back; *awn* short or none; *stigmata* featherlike; *cariopsis* free, furrowed.—*Panicle* branched, loose.

1. *Arrhenatherum elatius.* *Tall dog-grass.*

Panicle equally spread, rather contracted, drooping; *glumelles* smooth; *hermaphrodite flowret* nearly awnless; *culm* with smooth knots; *root* knotty; *leaves* smooth.

Avena elatior, *Lin. S. P.* 117.
Avena elata, *Salisb. Prod.* 23.
Holcus avenaceus, *Wigger Fl. Holsat.* 72.

Fields and pastures; perennial; June, July.

Culm erect, 4 feet high; *leaves* dark green, flat, recurved; *sheaths* round; *ligula* short; *panicle* oblong; *peduncles* nearly verticillate; *spikelet* large, whitish, or white and purple.

β. *muticum.* *Flowrets* awnless.

γ. *submuticum.* *Hermaphrodite flowret* awnless.

δ. *aristatum.* *Flowrets* with long awns.

2. *Arrhenatherum bulbosum.* *Bulbose dog-grass.*

Panicle equally spread, verticillate; *glumelles* smooth; *hermaphrodite flowret* nearly awnless; *knots* of the culm pubescent; *root* bulb-bearing.

Gramen avenaceum q. Gramen nodosum avenacea panicula C. Bauhin, *Raii Syn.* 406, 4.
Gramen caninum nodosum, *Ger. em.* 23.
Gramen caninum nodosum bulbosum vulgare, *Park.* 1175.
Avena nodosa, *Cullum*, 41.
Avena elatior β, *Schreb. Gram.*
Avena precatoria, *Thuill. Fl. Par.*

Fields; perennial; June and July.

Locustæ smaller than in the former species.

XXXV. 76. CATABROSIA. Beauvois. *Sweetgrass.*

Glumes 2 to 5-flowered; *spathelles* parallel, shorter than the flowrets, rather truncated, torn-edged, toothed; *glumelles* awnless; *lower spathellule* rather truncate; torn-edged, toothed; *upper* slightly 3-cut; *lodicule* lanceolate; *ovary* slightly nicked; *stigmata* featherlike, rather aspergilliform; *cariopsis* 2-horned.—*Panicle* compound.

Catabrosia aquatica. *Water sweetgrass.*

Panicle loose, spreading; *peduncles* rather verticillate; *locustæ* 1 or 2-flowered; *lower spathellule* furrowed, plaited, smooth; *leaves* flat, smooth.

Gramen miliaceum aquaticum, *Raii Syn.* 402, 3.
Aira aquatica, *Lin. S. P.* 95.
Poa dulcis, *Salisb. Prod.* 26.
Poa airoides, *Koel. Gram.* 194.

Watery places; perennial; May, June.

Root creeping; *culm* floating, extended; *branches* ascending; *leaves* floating, broad; *ligula* not notched, white; *panicle* upright; *locustæ* small, close together, coloured.

β. *uniflora.* *Locustæ* 1-flowered; *flowret* sessile.

XXXVI. 77. AIRA. Theophrastus. *Hairgrass.*

Glumes scariose, 2-flowered; *spathelles* alternate, nearly equal, longer than the flowrets; *glumelles* awned; *lower spathellule* torn or toothed at the tip, awned below the middle; awn coriaceous, plaited, twisted; *upper* 2-cut toothed; *lodicule* ovate, not nicked, bald; *stigmata* villose; *cariopsis* free.—*Panicle* branched; *leaves* bristlelike.

a. *Spathelles equal; glumelles awned above the base; flowrets nearly sessile; plant annual.* Canchium.

1. *Aira præcox.* *Early hairgrass.*

Panicle contracted, spikeshape; *base* of the spathelles naked; *awn* twice the length of the glumes; *ligulæ* obtuse.

Gramen avenaceum q. Gramen parvum præcox, panicula (potius spica) laxa canescente, *Raii Syn.* 407, 10.
Aira præcox, *Lin. S. P.* 97.
Avena præcox, *Pal. de Beauvois.*
Avena pusilla, *Web. Holsat.* 9.

Barren sandy places; annual; May and June.

Culm erect, 3 in. high, very smooth, pale green; *sheaths* inflated, angular, smooth; *panicle* erect; *locustæ* upright.

2. *Aira caryophyllea.* *Clove hairgrass.*

Panicle diverging, 3-forked; *peduncles* rather straight; *base* of the spathellules rather naked; *awn* scarcely longer than the glumes; *ligula* long, acute.

Gramen avenaceum q. Gramen paniculatum locustis parvis purpuro-argenteis annuum, *Raii Syn.* 407, 7.
Avena caryophyllea, *Lin. S. P.* 97.

Sandy places; annual; July.

Culm branched at bottom, leafy; *sheaths* slightly striated; *panicle* 3 or 4-forked; *locustæ* small, silvery purple.

b. *Spathelles unequal; spathellules awned at the base; flowrets pedicelled; perennial.*

3. *Aira flexuosa.* *Bent hairgrass.*

Leaves long, bristlelike, smooth; *ligula* short, blunt; *panicle* expanding; *peduncles* in pairs, flexuose; *awn* double the length of the spathellules; *spathellules* toothed, spinous.

Gramen avenaceum q. Gramen paniculatum locustis parvis, purpuro-argenteis, majus et perenne Doody, *Raii Syn.* 407, 8.
Aira flexuosa, *Lin. S. P.* 96.

Wet mountainous places; perennial; June, July.

Roots in tufts; *culm* 18 in. high, smooth, round, nakedish; *leaves* radical, fascicled, smooth, shorter than the culm; *sheaths* rough; *locustæ* small, whitish.

4. *Aira setacea.* *Bristly hairgrass.*

Leaves short, bristlelike, rough; *ligula* long, acute; *panicle* rather contracted; *peduncle* becomes flexible; *awn* double the length of the spathellule; *spathellules* toothed, spinous.

Aira setacea, *Huds. Fl. Angl. ed.* 1.
Aira flexuosa β, *Smith Fl. Brit.* 85.
Aira montana, *Willd. Sp. Pl.* 1, 379.
Avena montana, *Web. Holsat.* 9?
Aira scabro-setacea, *Knapp Gram.* 32.

Woods and heaths; perennial; July.

XXXVII. 78. ANTHOXANTHUM. Lin. *Spring-grass.*

Glume 3-flowered; *spathelles* unequal, membranous, longer than the glumelles: SIDE FLOWRETS neuter, 1-spathelluled, awned; *one* flowret with a twisted, plaited awn below the middle; *the other* with a straight awn near the tip: MIDDLE FLOWRET hermaphrodite, three times shorter than the side flowrets; *spathellules* membranous, rather blunt, awnless; *style* simple at bottom; *stigmata* very long, featherlike; *cariopsis* free, furrowed.—*Spike* branched.

Anthoxanthum odoratum. *Sweet spring-grass.*

Spike ovate, oblong; *fertile flowret* rather pedicelled, longer than the awn; *spathellule* of the barren flowret ciliated.

Gramen vernum spica brevi laxa, *Raii Syn.* 398, 1.
Anthoxanthum odoratum, *Lin. S. P.* 40.

Fields and pastures; perennial; May.

Root fibrous; *culm* 2 feet high, upright, smooth, bald, naked above; *leaves* lanceolate, acute, shorter than the sheath, ciliated; *upper leaves* very short; *sheaths* smooth, villous above; upper very long; *ligulæ* nicked; *spike* interrupted, greenish becoming yellow, woolly; *peduncles* semiverticillate, fewflowered; *locustæ* very smooth, erect; *plant* while drying smells like woodroof.

β. *pubescens.* *Locustæ* pubescent.

γ. *effusum.* *Spike* slightly branched; *leaves* pubescent.

δ. *alpinum.* *Spike* branched; *awn* longer than the flowret, *leaves* smooth. Perhaps a distinct species.

XXXVIII. 79. HOLCUS. Linnæus. *Softgrass.*

Glumes 2-flowered; *spathelles* alternate, nearly equal, membranous, longer than the flowrets, mucronate; *flowrets* dissimilar, both hermaphrodite; *lower flowret* longer; *spathellules* not notched, awned on the back; awn bent or plaited; *lower spathellule* of the upper flowret mostly awnless; *lodicule* lanceolate, not notched, bald; *style* 2-parted; *cariopsis* free, not furrowed.—*Panicle* contracted, cylindrical.

1. *Holcus lanatus.* *Woolly softgrass.*

Awn of the upper flowret bowed, bent back; *spathelles* unequal, villous; *root* fibrous; *leaves* villous, soft.

Gramen miliaceum pratense molle, *Raii Syn.* 404, 14.
Gramen pratense paniculatum molle, *Park.* 1155.
Gramen lanatum Dalechampii, *Ger. em.* 30 *.
Holcus lanatus, *Lin. S. P.* 1485.
Avena lanata, *Koel. Gram.* 303.
Aira Holcus lanatus, *Vill. Delph.* 2, 87.

Fields and pastures; perennial; June and July.

Culms in tufts, 2 feet high, leafy above, pubescent; *leaves* broad, pubescent; *sheaths* woolly, grey; *ligulæ* short; *panicle* coloured becoming grey; *peduncles* in pairs or threes; *locustæ* ovate.

2. *Holcus mollis.* *Tender softgrass.*

Awn of the upper flowret bent; *spathelles* nearly equal, rather naked; *root* creeping; *leaves* rather naked.

Gramen miliaceum aristatum molle, *Raii Syn.* 404, 15.
Holcus mollis, *Lin. S. P.* 1485.
Avena mollis, *Koel. Gram.* 300.
Aira Holcus mollis, *Vill. Delph.* 2, 88.

Woods and fields; perennial; June and July.

Culm solitary, smooth; knots pubescent; *leaves* pubescent becoming smooth; *sheaths* rather smooth; *ligula* long; *panicle* greenish black; *peduncles* rough; *locustæ* ovate, lanceolate.

XXXIX. 80. DESCHAMPSIA. Beauv. *Pearlgrass.*

Glume 2 or 3-flowered; *spathelles* alternate, nearly equal, longer than the flowrets; *lower spathellule* many toothed at the tip, awned at bottom; *awn* straight, scarcely longer than the base; *upper spathellule* 2-cut toothed; *lodicule* roundish, not nicked, hairy; *style* 2-parted; *stigmata* distant, villous; *cariopsis* free, scarcely furrowed. — *Panicle* branched, semiverticillate.

1. *Deschampsia lævigata.* *Smooth pearlgrass.*

Panicle contracted; *base* of the spathellules pilose; *peduncles* very short, smooth; *leaves* and *sheath* very smooth.

Aira lævigata, *Smith T. L. S.* 10, 334.
Deschampsia lævigata, *Roemer Sys. Veg.* 687.

Mountains and sea-coasts in the North; per.; June, July. Culm 18 in. high.

β. *vivipara.* *Panicle* viviparous.

2. *Deschampsia cæspitosa.* *Tufted pearlgrass.*

Panicle spreading; *base* of the spathellules pilose; *pedicells* of the upper flowrets long, hairy; *leaves* furrowed above; *sheaths* roughish; *ligula* lanceolate, acute.

Gramen miliaceum segetale majus, *Raii Syn.* 403, 5.
Gramen segetum paniculâ speciosa, *Park.* 1158.
Gramen segetale, *Ger. em.* 5.
Aira cæspitosa, *Lin. S. P.* 96.
Aira altissima, *La Marck Fl. Tr.* 3, 581.
Deschampia cæspitosa, *Pal. de Beauvois.*
Hussocks. Rough caps. Bulls' faces.

Woods and damp fields; perennial; July.

Roots in thick tufts; *culm* 3 feet high, upright; *leaves* slender; *ligula* long, 2-cut; *panicle* greenish purple; *locustæ* small.

β. *argentea.* *Panicle* silvery white.

γ. *vivipara.* *Panicle* viviparous.

3. *Deschampsia Doniana.* *Don's pearlgrass.*

Panicle rather spreading; *base* of the spathellule longly pilose; *pedicell* of the upper flowret long, pilose; *leaves* furrowed above; *sheaths* very smooth; *ligula* truncated at top.

Aira glomerata, *Geo. Don.*

Mountain Clova, Angus-shire; perennial; July.

Roots in tufts; *culm* erect, 2 feet high, very smooth; *leaves* stiff, flat, narrow, become revolute; *sheaths* short, lower white with a membranous edge; *ligulæ* long; *panicle* upright, villous.

XL. 81. CORYNEPHORUS. Beauvois. *Club-awn.*

Glumes 2-flowered; *spathelles* alternate, membranous, longer than the flowrets; *lower spathellule* not notched, awned at bottom; *awn* woolly, jointed in the middle; the lower part coriaceous, twisted, threadshape; the upper clubshape, smooth; *upper spathellule* 2-cut toothed; *stigmata* villous.—*Panicle* branched.

Corynephorus canescens. *Grey club-awn.*

Leaves bristlelike; *culm* leafy; *panicle* spreading, becoming spikeshape, sheathed.

Gramen miliaceum maritimum molle, *Raii Syn.* 405, 16.
Aira canescens, *Lin. S. P.* 97.
Avena canescens, *Weber Holsat.* 9.
Weingaertneria canescens, *Bern. Erford.* 51.
Corynephorus canescens, *Pal. de Beauvois.*

Sands by the sea; perennial; July.

Root fibrous, in tufts; *culm* upright or ascending, 6 in. high, smooth; *leaves* erect, stiff, rough, glaucous; *ligula* lanceolate, acute; *panicle* upright, rather facing one way, rarely coming out of the sheath; *locustæ* silvery-grey.

F. AGROSTIDEÆ. *Rachis* panicled; *panicle* sometimes contracted, spikeshape; *locustæ* solitary, one-flowered; *glumes* and *glumelles* of nearly the same consistence, often keeled; *lower spathellule* awned or awnless; *upper* sometimes 2-keeled; *styles* 2.

XLI. 82. CHILOCHLOA. Beauvois. *Cats-tail.*

Spathelles alternate, unequal, acute, longer than the flowrets, the edge and back often pilose; *glumelles* awnless, rather cartilaginous; *rudiment* of an abortive flowret pedicelled, threadshape; *upper spathellule* notched; *lodicule* lanceolate, not notched, bald; *style* short, 2-parted; *stigmata* villous; *cariopsis* detached, not furrowed.—*Spike* branched, cylindrical.

1. *Chilochloa aspera.* *Rough cats-tail.*

Spike cylindrical, lobed, loose; *glumes* naked, thickened above; *glumelles* blunt; *culm* branchy.

Phleum paniculatum, *Huds. Fl. Angl.* 26, omitting the synonyms.
Phalaris paniculata, *Aiton Hort. Kew.* 6, 87.
Phalaris aspera, *Retz Obs.* 414.
Phleum asperum, *Villars Delph.* 1, 61.
Chilochloa aspera, *Pal. de Beauvois*, 37.

Fields, walls, and heaths; annual; June and July.

Root fibrous; *culms* 9 in. high; *leaves* smooth, the uppermost very short; *sheaths* inflated, smooth; *ligula* long, acute; *spike* stiff, rather acute; *peduncles* verticillate; *glumes* with very short awns, keeled, gibbous above, edge opake, very bluntly truncated; *smell* like that of anthoxanthum.

2. *Chilochloa Boehmeri.* *Boehmer's cats-tail.*

Spike cylindrical, lobed; *spathelles* rather smooth, inner edge turned up; *spathellules* acute; *sheaths* slightly bellied; *culm* not branched.

Phalaris phleioides, *Lin. S. P.* 80.
Phleum phalaroides, *Koel. Gram.* 182.
Phleum Boehmeri, *Wibel Werth.* 125.

Sandy fields; perennial; June and July.

Root fibrous; *culm* mostly single, purple, shining, 18 in. high; *leaves* and *sheaths* rather rough; *spike* dense, ovate-cylindrical.

3. *Chilochloa arenaria.* *Sand cats-tail.*

Spike ovate, lanceolate, scarcely branched, obtuse; *spathelles* ciliated; *spathellules* short, torn-edged; *sheaths* bellied; *culm* branchy.

Gramen typhinum maritimum minus, *Raii Syn.* 398, 4.
Phleum arenarium, *Lin. S. P.* 88.
Phalaris phleioides β, *Aiton Hort. Kew.* 1, 86.
Phalaris arenaria, *Huds. Fl. Angl.* 23.
Chilochloa arenaria, *Pal. de Beauvois.*

Sandy places near the sea; annual; June.

Roots fibrous; *culm* many, leafy below, naked above, 9 in. high, purple, shining; *leaves* glaucous; *sheaths* smooth; *spike* scarcely lobed.

4. *Chilochloa hirsuta.* *Rough cats-tail.*

Panicle cylindrical, lobed, loose; *spathelles* lanceolate, keeled, ciliate hairy, with very short bristles; *spathellules* oblong, hairy.

Phleum phalarideum, *Vill. Delph.* 2, 60.
Phleum Michelii, *Allioni Pedem.* 2138.
Phalaris alpina, *De Cand. Syn. Fl. Fr.* 1489.
Chilochloa Michelii, *Pal. de Beauvois*, t. 7, f. 2.

Alpine rocks; perennial; July.

Root creeping, thickened above; *culm* erect, very smooth, 18 in. high; *leaves* smooth, edge membranous, white; *sheaths* lax; *upper* very long, purplish; *ligula* obtuse; *panicle* soft, green or purplish.

XLII. 83. PHLEUM. Pliny. *Timothy.*

Spathelles alternate, boatshaped, compressed, nearly equal, twice as long as the spathellules, truncated at the tip, pointed with a prominent, bristlelike, intermediate rib; *glumelle* awnless; *lower spathellule* truncated, manytoothed, inclosing the upper twotoothed spathellule; *lodicule* lanceolate, acute, not nicked, bald; *ovary* beaked; beak inclined; *style* 2-parted; *stigmata* nearly aspergilliform, villous; *cariopsis* free, not furrowed, beaked; beak 2-parted. —*Spike* cylindrical.

1. *Phleum pratense.* *Meadow timothy.*

Spike cylindrical, very long; *spathelle* much longer than the beard; keel ciliated; *culm* upright; *root* fibrous.

Gramen typhinum majus sive primum, *Ger. em.* 11; *Raii Syn.* 398, 1.
Gramen typhinum medium seu vulgatissimum, *Park.* 1170.
Phleum pratense, *Lin. S. P.* 87.

Fields and pastures; perennial; July to September.

Culm 3 feet high, naked above, smooth, bald; *leaves* flat, very acute, bald, rough; *ligula* obtuse; *spike* 3 to 5 in. long, green, rather blunt; *locustæ* very much crowded.

β. *viviparum.* *Glumes* and *glumelles* changed into leaves.

γ. *minus.* *Culm* short, not bulbose at the base.

2. *Phleum nodosum.* *Knotted timothy.*

Spike cylindrical, short; *spathelles* much longer than the beard; *keel* ciliated; *culm* ascending, bulbous at bottom; *root* fibrous.

Gramen typhinum q. Gramen nodosum spica parva C. Bauhin, *Raii Syn.* 398, 3.
Phleum nodosum, *Lin. S. P.* 88.
Phleum pratense, var. *Huds. Fl. Angl.* 26.

Barren places; perennial; July to November.

Culm 9 in. high, rather naked above; *leaves* very acute; *spike* 1 to 2 in. long, obtuse.

3. *Phleum alpinum.* *Alpine timothy.*

Spike ovate, cylindrical; *spathelles* the length of the beard; *keel* ciliated; *culm* ascending; *root* rather creeping.

Phleum alpinum, *Lin. S. P.* 88.

Mountains in the North; perennial; July.

Root jointed; *culm* 18 in. high; *upper sheaths* very long, inflated; *lower ligula* very short; *upper* slender, acute; *spike* 1 in. long, blackish purple.

XLIII. 84. PHALARIS. Dioscorides. *Phalaris.*

Spathelles alternate, nearly equal, boatshape, gibbous on the back, often membranous winged, longer than the flowrets; *glumelles* awnless, hardened, leathery; *rudiment* of an abortive flowret sessile, like an appendix, awlshape, bald or hairy; *upper spathellule* slightly nicked; *lodicule* ovate, not notched, hairy; *style* short, 2-parted; *stigmata* villous; *cariopsis* free, included in the hardened glumelle, not furrowed.—*Panicle* spikeshape, or effused; *locustæ* crowded; *peduncle* often involucrated.

a. *Panicle spikeshape; keel of the glumelles winged.*

1. *Phalaris Canariensis.* *Canary phalaris.*

Panicle ovate; *margin* of the upper spathelle truncate; *culm* rather upright; *root* fibrous.

Phalaris major, semine albo, *Raii Syn.* 394, 1.
Phalaris, *Ger. em.* 86.
Phalaris Canariensis, *Lin. S. P.* 79.
Phalaris ovata, *Moench. Meth.*
Canary grass.

Roadsides, ruins, also cultivated; annual; June to Sept.

Culms many, 2 feet high, smooth; *leaves* flat, lanceolate, edge white; *upper sheaths* inflated; *ligula* large; *panicle* very dense; *peduncles* short; *locustæ* broad, ovate, white with 2 lunate green lines.

Seeds used as food for singing birds.

b. *Panicle loose; keel of the spathelle sharp.*

2. *Phalaris arundinacea.* *Reedy phalaris.*

Panicle upright, oblong, bellied, contracted; *locustæ* facing one way; *spathelles* acute; *leaves* flat; *culm* upright; *root* creeping.

Gramen arundinaceum, acerosa glumâ, Jerseyanum, *Raii Syn.* 400, 2.
Phalaris arundinacea, *Lin. S. P.* 80.
Arundo colorata, *Solander in Aiton Hort. Kew.* 1, 116.
Calamagrostis colorata, *Sibthorp Fl. Ox.* 37.
Typhoides arundinacea, *Moench. Meth.* 99.
Baldigera arundinacea, *Flor. Wetter.* 99.
Calamagrostis variegata, *With. Bot. Arr.* 2, 124.

Bogs and river-sides; perennial; July.

Roots in tufts; *culm* upright, 3 feet high, knots smooth; *leaves* very broad, flat; *sheaths* round, long; *ligula* short, obtuse; *panicle* large, glomerate; *peduncles* in pairs or threes; *involucrum* small, white; *locustæ* compressed, whitish or purplish; ribs 3, green.

β. *glauca.* *Leaves* glaucous.

γ. *picta.* *Leaves* elegantly streaked with white.

Ladies' laces. Gardeners' garters. Ribband grass.

XLIV. 85. ALOPECURUS. Theophrastus. *Foxtail.*

Spathelles alternate, lower larger, distinct or grown together at the bottom; *spathellule* one, pitchershape, split on one side, awned below the middle; *lodicule* linear, not nicked, bald; *style* 2-parted, nearly simple at bottom; *stigmata* very long, nearly aspergilliform.—*Spike* compound, stiff, cylindrical, not involucrated; *peduncles* very short.

a. *Spathelles soldered together above the middle; keel dilated, bald above; awn long.*

1. *Alopecurus agrestis.* *Wild foxtail.*

Spathelles acute, rough, almost bald; *spike* cylindrical, attenuated, acute; *peduncles* not branched, 1-flowered; *culm* erect, rather rough.

Gramen myosuroides majus, spica longiore, aristis rectis, *Raii Syn.* 397, 1.
Gramen alopecuroides minus, *Ger. em.* 10.
Gramen alopecuroides spica longa majus et minus, *Park.* 1169.
Alopecurus agrestis, *Lin. S. P.* 89.
Alopecurus myosuroides, *Huds. ed.* 1, 23.
Great mouse-tail grass.

Fields and ways; annual; July.

Roots fibrous; *culm* 18 in. high, leafy; *leaves* rough above; *ligula* lanceolate; *spike* 3 in. long, slender, purplish.

β. *minor.* *Small,* brown; *spike* short.

Gramen myosuroides minus, spica breviore, aristis recurvis, *Raii Syn.* 397, 2.

b. *Spathelles soldered at the base; keel ciliated; awn long.*

2. *Alopecurus pratensis.* *Field foxtail.*

Spathelles acute, villose; *awn* longer than the spathelles; *spike* cylindrical, obtuse; *peduncles* branched, manyflowered; *culm* upright, smooth; *root* fibrous.

Gramen alopecuroides q. Gramen alopecuro simili, glabrum cum pilis longiusculis in spica, Onocordon mihi denominatum, J. Bauhin, *Raii Syn.* 396, 1.
Gramen alopecuroides majus, *Ger. em.* 10.
Gramen phalaroides majus sive Italicum, forte etiam Gramen phalaroides spica molli sive Germanicum, C. Bauhin, *Park.* 1164.
Alopecurus pratensis, *Lin. S. P.* 72.
Common foxtail grass.

Fields and pastures; perennial; May.

Culm 2 feet high, thick, very smooth; *leaves* broad, long; *sheaths* smooth; *ligula* short, blunt; *spike* 2 or 3 in. long, whitish.

β. *lobatus.* *Spike* much lobed.

3. *Alopecurus alpinus.* *Alpine foxtail.*

Spathelles rather acute, villous; *awn* as long as the spathelles; *spike* ovate; *peduncles* branched, manyflowered; *culm* upright, smooth; *root* creeping.

Alopecurus alpinus, *Eng. Bot.* 1126.
Alopecurus ovatus, *Knapp Gram.* 15.

Scotch Alps; perennial; June and July.

Culm 1 foot high, upright; *radical leaves* linear, slender; *stem-leaves* short, broad, acute; *sheaths* long, bellied; *ligula* short; *spike* blunt, whitish.

c. *Spathelles free; keel ciliated.*

4. *Alopecurus bulbosus.* *Bulbous foxtail.*

Spathelles acute, villose; *awn* longer than the spathelles; *spike* cylindrical, attenuated; *culm* upright, bulbose at bottom.

Gramen myosuroides nodosum, *Raii Syn.* 397, 3.
Alopecurus bulbosus, *Lin. S. P.* 1665.
Alopecurus geniculatus β, *Huds. Fl. Angl.* 27.

Salt-water marshes; perennial; July.

Roots in tufts; *culm* 9 in. high, smooth; *radical leaves* smooth, short; *stem-leaves* smooth, linear, spreading; *ligula* short; *spike* 2 in. long, dark sea-green; *anthers* deep greenish blue.

5. *Alopecurus geniculatus.* *Kneed foxtail.*

Spathelles blunt, villose; *awn* longer than the spathelles; *anthers* linear; *spike* cylindrical, blunt; *peduncles* scarcely branched, 1 or 2-flowered; *culm* ascending, knee-jointed.

Gramen alopecuroides q. Gramen aquaticum geniculatum spicatum, *Raii Syn.* 396, 2.
Gramen fluviatile spicatum, *Ger. em.* 14.
Gramen aquaticum spicatum, *Park.* 1275.
Alopecurus geniculatus, *Lin. S. P.* 89.

Watery places; perennial; May and June.

Root fibrous; *culm* floating, very long, leafy, lower joint rooting; *leaves* rather smooth; *ligula* short; *spike* short, purplish; *anthers* linear oblong, purple, becoming dull yellow.

β. *bulbosus.* *Culm* rather upright, bulbous at bottom; *spike* dark green.

6. *Alopecurus fulvus.* *Flamecolour foxtail.*

Spathelles blunt, villous; *awn* as long as the spathelle; *anthers* nearly round; *spike* cylindrical; *peduncles* branched, manyflowered; *culm* ascending, knee-jointed.

Gramen alopecuroides q. Gramen fluviatile album Tabernæmontani, *Dillen in Raii Syn.* 396, 2 *.
Alopecurus geniculatus 4, *With. Bot. Arr.* 120.
Alopecurus fulvus, *Engl. Bot.* 1467.
Duck-grass. Spike flote-grass.

Watery places; perennial; August and September.

Root fibrous; *leaves* broader than those of alopecurus geniculatus; *sheaths* inflated; *spike* 2 in. long, pale green; *anthers* fine orange, becoming quite white; *awn* very slender, soft.

XLV. 86. PSAMMA. Beauvois. *Marram.*

Spathelles alternate, acute, lower smallest; *spathellules* hairy below the tip, mucronate, nearly as long as the spathelles, acute; *lodicule* lanceolate, awlshape, acute, bald; *ovary* topshaped, rather 3-sided; *style* 3-parted; *stigmata* 3, featherlike; *cariopsis* top-shape, rather 3-sided, free; *corculum* terminal?—*Spike* branched, erect, cylindrical; *peduncles* branched, very short; *locustæ* many, crowded.

Psamma arenaria. *Sand marram.*

Spike long; *leaves* involute, pungent; *root* creeping.

Gramen sparteum spicatum foliis mucronatis longioribus, vel spicâ secalina, *Raii Syn.* 393, 1.
Spartum Anglicanum, *Ger. em.* 38.
Spartum marinum nostras, *Park.* 1198.
Arundo arenaria, *Lin. S. P.* 121.
Calamagrostis arenaria, *With. Bot. Arr.* 123.
Ammophilla arundinacea, *Host Gram. Austr.* 4, 41.
Psamma arenaria, *Roem. Sys. Veg.* 845.

Sandy sea-shores; perennial; July.

Roots spreading; *culm* 4 feet high, stiff, leafy; *leaves* upright, spreading, glaucous, very smooth, bald; *sheaths* smooth; *ligula* long, acute; *panicle* 6 in. long; *locustæ* light glaucous green.

XLVI. 87. SPARTINA. Schreber. *Sea-grass.*

Spathelles alternate, very acute; lower smallest; *spathellules* 2-cut, nicked, toothed, shorter than the spathelles, awnless; *lodicule* rather truncated, fringed; *style* very long; *stigmata* 3, villous.—*Spike* branched; *spikelets* alternate; *locustæ* 1-sided, sessile, in two rows.

Spartina stricta. *Rough sea-grass.*

Spathelles rather longer than the spathellules, keel rather smooth; *spikelets* adpressed; *locustæ* loosely tiled, upright; *leaves* convolute, pungent.

Gramen sparteum, q. Spartum Essexianum, spicâ gemina clausa Petiver, *Raii Syn.* 393, 4.
Dactylis cynosuroides, *Huds. Fl. Angl.* 43; but not of Linnæus.
Dactylis stricta, *Solander in Ait. Hort. Kew.* 6, 104.
Limnetis pungens, *Persoon Syn.* 1, 72.
Spartina stricta, *Roth N. Beytr.* 101.

Marshy fields at the mouth of large rivers; per.; July, Aug.

Root creeping; *culm* upright, 2 feet high, not branched, stiff, very smooth; *leaves* stiff, upright; *sheaths* long, very smooth, shining, very close to the culm, upper partly enclosing the lower spikelet; *ligula* very short; *spikelets* 2, hairy, soft; *spathelles* mostly mucronate below the tip.

β. *triplex.* *Spikelets* three.

XLVII. 88. VILFA. Adanson. *Bent.*

Spathelles alternate, not notched, rather longer than the spathellules, lower largest; *lower spathellule* 3-cut, toothed, acute or ending in a bristle; *upper* 2-cut; *lodicule* acute; *stamens* (1 to) 3; *style* 2-parted, short; *stigmata* villous; *cariopsis* free, not furrowed.—*Panicle* branched, more or less contracted or effused; *peduncles* semiverticillate.

1. *Vilfa alba.* *White bent.*

Culm creeping, branched, rooting; *panicle* loose, spreading; *spathellules* smooth, nearly equal, toothed, serrulate; *locustæ* lanceolate; *leaves* flat, rough; *sheaths* smooth.

Gramen miliaceum majus panicula spadicea, *Raii Syn.* 405, 11.
Gramen miliaceum majus panicula viridi, *Raii Syn.* 404, 12.
Agrostis alba, *Lin. S. P.* 93.
Agrostis polymorpha ζ, seu palustris, *Huds. Fl. Angl.* 22.
Marsh bent grass. White Squitch. Squitch.

Marshes and woods; perennial; July.

Root creeping, thick, white; *culm* naked above, 3 feet high, smooth; *ligula* obtuse.

β. *conferta. Short; peduncles* crowded at bottom, long, naked, not branched; *both spathelles* serrated on the back.

γ. *ramosa. Short; peduncles* crowded at bottom, long, naked, branched; *upper half* only of the inner spathelle serrated.

δ. *nuda. Peduncles* all naked at bottom, and branched; *upper half* only of the inner spathelle serrated.

ε. *sylvatica. Glumes* and *glumelles* growing longer after flowering; *lower branch* of the panicle naked at bottom.

Gramen miliaceum sylvestre glumis oblongis, *Raii Syn.* 404, 13.
Agrostis sylvatica, *Lin. S. P.* 1665.
Agrostis polymorpha η, *Huds. Fl. Angl.* 32.

2. *Vilfa nigra.* *Black bent.*

Stolones creeping, branchy; *culm* upright; *panicle* scattered, fewflowered; *locustæ* lanceolate; *peduncles* bare at bottom; *spathelles* unequal; *upper part* of the lower spathelle serrulate; *upper spathelle* smooth; *leaves* nearly smooth, slender; *sheaths* smooth.

Agrostis nigra, *With. Bot. Arr.* 173.
Agrostis stolonifera, *Leers Herb.* 26; not of Linnæus.
Black squitch.

Woods and moist places; perennial; July.

Culms many, slender, 2 feet high; *leaves* flat, weak; *ligulæ* blunt; *panicle* 2 to 4 in. long; *peduncles* deep purple; *locustæ* brown, scattered.

3. *Vilfa stolonifera.* *Running bent.*

Culm creeping, taking root, branchy; *panicle* compact, lower branches spreading, densely crowded at bottom with flowers; *locustæ* ovate, lanceolate; *spathelles* nearly equal, pubescent; *lower spathelle* serrulated at the upper part; *leaves* flat.

Gramen miliaceum q. Gramen montanum miliaceum minus, radice repente C. Bauhini, *Raii Syn.* 402, 2.
Gramen caninum supinum, *Ger. em.* 261.
Agrostis stolonifera, *Lin. S. P.* 93.
Agrostis polymorpha δ, *Huds. Fl. Angl.* 31.
Black Squitch. Fiorin grass.

Fields and damp pastures; perennial; July and August.
Root fibrous; *culm* smooth, blackish purple, *leaves* rough; *sheaths* rather smooth; *ligula* rounded; *panicle* upright, rather 1-sided; *spathelles* rather blunt, purplish.

β. *marina.* *Culm* stiff, glaucous, 3 in. high; *sheaths* rather smooth.

γ. *brevis.* *Panicle* pale red becoming dull green, branches very short; *leaves* and *sheaths* rough.

Agrostis brevis, *Knapp Gram.* 116.

δ. *maritima.* *Branches* of the panicle long, naked, short, crowded at bottom; *leaves* and *sheaths* rough.

Agrostis maritima, *With. Bot. Arr.* 2, 175.

4. *Vilfa vulgaris.* *Common bent.*
Culm upright; *panicle* hairlike, upright, spreading; *peduncles* threeforked, naked at bottom; *pedicells* upright, *locustæ* ovate, crowded; *outer spathelle* serrate at the tip; *inner* smooth; *inner spathellule* very short, blunt; *stem-leaves* rough; *sheaths* very smooth; *ligula* truncated.

Gramen miliaceum locustis minimis, panicula fere arundinacea, *Raii Syn.* 402, 4.
Agrostis vulgaris, *With. Bot. Arr.* 132.
Agrostis tenuis, *Sibthorp, Oxf.* 36.
Agrostis capillaris, *Huds. ed.* 1; but not of Linnæus.
Agrostis polymorpha α, *Huds. Fl. Angl.* 31.
Agrostis hispida, *Willd. S. P.* 1, 370.
Fine bent grass.

Pastures; perennial; July and August.
Culm 2 feet long; *leaves* long, slender; *lower leaves* smooth; *panicle* oblong; *peduncles* rather smooth; *locustæ* small, coloured.

5. *Vilfa divaricata.* *Spread bent.*
Culm upright; *panicle* spreading out wide; *peduncles* hairlike, naked above half their length, 3-forked; *pedicells* spread out wide; *locustæ* ovate, spread; *outer spathelle* serrulate; *inner* smooth; *inner spathellule* very short, obtuse; *stem-leaves* rough; *sheaths* very smooth; *ligula* truncated.

Agrostis tenella, *Hoffm. Germ.* 3, 1, 36?
Agrostis divaricata, *Hoffm. Germ.* 3, 1, 37.
Agrostis capillaris, *Willd. S. P.* 1, 369.
Agrostis vulgaris tenella, *Gaud. Agr. Helv.* 84.
Agrostis vulgaris seminuda, *Knapp Gram.* 115.

Fields and meadows; perennial; July.

Culm 2 feet long; *leaves* slender; *panicle* pyramidical, large; *peduncles* rather rough; *locustæ* pale; *style* falling off.

β. pumila. Culms 2 in. high, in tufts; *cariopsis* long, covered with a dust (ustilago?) *style* remaining.

Agrostis pumila, *Lin. Mant.* 1, 31.
Agrostis vulgaris γ, *Smith Fl. Brit.* 97.
Agrostis divaricata; var. *Hoffm. Germ.* 3, 1, 37.

In barren ground.

XLVIII. 89. AGROSTIS. Theophrastus. *Fiorin.*

Spathelles alternate, membranous, longer than the spathellules, nearly equal or lower largest; *lower spathellule* 2-cut at the tip, lobes often nicked, awned below the middle; *awn* plaited, twisted; *upper* much shorter, 2 or 4-cut, toothed; *lodicule* obovate, not nicked, smooth; *style* short, 2-parted; *stigmata* villous; *cariopsis* free, not furrowed. —*Panicle* branched more or less, contracted or effused.

1. *Agrostis canina.* *Dogs fiorin.*

Spathelles nearly equal; *tip* of the outer serrate; of the inner smooth; *panicle* upright, spreading; *peduncles* hairlike, three-forked; *pedicles* upright; *locustæ* ovate, crowded; *awn* twice the length of the spathellule; *culm* upright.

Agrostis canina, *Leers Herb.* 21.
Agrostis vulgaris; var. *Smith Fl. Brit.* 79.
Agrostis capillaris; var. *Vill. Delph.* 2, 73.

Fields; perennial; July.

Culm 18 in. high, branchy at bottom, smooth; *stem-leaves* rough; *ligula* truncated; *panicle* 3 in. long, coloured; *peduncle* naked at bottom, smooth; *locustæ* coloured.

2. *Agrostis laxa.* *Loose-panicle fiorin.*

Spathelles nearly equal; *tip* of the outer serrate, of the inner smooth; *panicle* spreading; *peduncles* hairlike, three-forked; *pedicells* spread; *locustæ* ovate, spread; *awn* twice as long as the spathellules; *culm* upright.

Agrostis vulgaris γ; var. *Smith Fl. Brit.* 80.

Fields; perennial; July.

Root creeping; *culm* 18 in. high, smooth, branchy at bottom; *ligula* very shortly truncated; *panicle* oblong, becoming pyramidical; *peduncles* rather long, naked; *locustæ* pale.

β. *pumila.* *Culms* in bundles, 2 in. high; *cariopsis* long, covered with a dust (ustilago?)

Agrostis vulgaris γ; var. *Smith Fl. Brit.* 80.

3. *Agrostis pubescens.* *Downy fiorin.*

Spathelles nearly equal, pubescent, tip of the outer spathelle serrate, of the inner smooth; *panicle* contracted; *peduncles* short; *locustæ* lanceolate, crowded; *awn* short; *culm* branchy, upright.

Agrostis stolonifera; var. *Smith Fl. Brit.* 81.

Fields and pastures; perennial; July, August.

XLIX. 90. APERA. Adanson. *Silk-grass.*

Spathelles alternate, nearly equal, rather longer than the spathellules; *lower spathellule* not nicked at the tip, bristled below the tip; *upper* 2-cut, toothed; *lodicule* lanceolate, not nicked, bald; *stamens* 1 or 3; *style* short, 2-parted; *stigmata* villous; *cariopsis* free, husked, not furrowed.—*Panicle* branched, large.

1. *Apera effusa.* *Large-panicled silk-grass.*

Panicle spreading, rather 1-sided, manyflowered; *shorter peduncles* crowded with flowers; *longer* naked at bottom; *leaves* smooth; *culm* upright; *awn* 5 times as long as the spathellules.

Gramen miliaceum majus, glumis aristatis, spadiceis et pallidis, *Raii Syn.* 405, 17.
Gramen arundinaceum, *Ger. em.* 5.
Gramen agrorum spica venti, *Park.* 1158.
Agrostis Spica venti, *Lin. S. P.* 91.
Apera Spica venti, *Palis. de Beauvois.*

Corn-fields in moist sandy soils; annual; June and July.

Root fibrous; *culm* smooth, 3 feet high; *leaves* rather smooth; *sheaths* smooth; *ligula* torn; *panicle* very large; *locustæ* minute, green or yellowish.

2. *Apera? palustris.* *Marsh silk-grass.*

Panicle spreading, manyflowered; *shorter peduncles* crowded with flowrets; *longer* naked at bottom; *awn* shorter than the spathellules; *culm* creeping, taking root; *leaves* rough.

Agrostis palustris, *With. Bot. Arr.* 168.

Swampy places; perennial; June and July.

Culm rather smooth, branched; *leaves* broad; *sheaths* rough; *ligula* rough, long; *panicles* 6 in. long; *spathelles* equal; keel serrate, of the inner only half way down; *spathellules* one fourth shorter than the spathelles, the inner shorter and narrow.

L. 91. AGRAULUS. Beauvois. *Field-grass.*

Spathelles alternate, longer than the spathellule, nearly equal; *spathellule* 1, nicked at the tip, awned below the middle; *awn* twisted, plaited; *lodicule* ovate, lanceolate, bald, not nicked; *stigmata* villous; *cariopsis* free, furrowed. —*Panicle* more or less spreading; *radical leaves* bristlelike; *stem-leaves* flat, broad.

1. *Agraulus caninus.* *Dogs field-grass.*

Tips of the outer spathelle serrate, of the inner smooth; *glumelles* naked; *locustæ* ovate, acute, coloured; *panicles* spreading; *peduncles* 3-forked, manyflowered; *leaves* in bundles, smooth; *culms* ascending.

Agrostis canina, *Lin. S. P.* 92.
Agrostis vinealis, *Schreber Spic.* 57, 977.
Ischodium caninum, *Schrader Germ.* 198.

Damp fields and pastures; perennial; July.

Culm prostrate, often branched, leafy, smooth; *leaves* flat, smooth; uppermost broader, rough; *sheaths* short; upper very long, roughish; *ligulæ* long, obtuse, fringed; *panicle* upright, hispid; *locustæ* small, violet.

2. *Agraulus pallidus.* *Pale-green field-grass.*

Keel of the outer spathelle serrate, of the inner at the tip only; *glumelles* naked; *locustæ* lanceolate, pale; *panicle* rather spreading; *peduncles* branchy, fewflowered; *leaves* rough.

Agrostis pallida, *With.* 169.

Forests; perennial; May and June.

Culm 18 in. high, smooth; *ligulæ* long, acute; *panicle* 3 in. long; *peduncles* capillary; *locustæ* pale green.

3. *Agraulus setaceus.* *Bristle field-grass.*

Spathelles serrate at the tip; *spathellules* hairy at bottom; *locustæ* lanceolate; *panicle* contracted; *peduncles* upright, manyflowered; *culm* ascending.

Agrostis setacea, *Curtis Lond.* 6, 12.
Agrostis alpina, *With. Bot. Arr.* 128.
Agrostis mutabilis, *Sibth. Oxf.* 16?
Agrostis canina β et γ, *Huds. Fl. Angl.* 38.

Dry heaths; perennial; July and August.

Culm 1 foot high; *leaves* pale, rather glaucous; *radical leaves* in tufts, upright; *ligula* long, torn; *panicle* whitish; *peduncles* branched, rough, semiverticillate; *spathelles* slender, acute; *spathellules* mucronated at the tip; *awn* longer than the spathelle.

β. *purpureus*. *Locustæ* slightly coloured.

LI. 92. ACHNATHERIUM. Beauvois. *Bushgrass.*

Spathelles alternate, lower largest; *spathellules* membranaceous; lower slightly nicked, awned; upper not nicked, pointed; *awn* terminal, not jointed, plaited, twisted; *lodicule* lanceolate, not nicked, bald: *style* short, 2-parted; *stigmata* villose; *cariopsis* furrowed.—*Panicle* branched, loose.

Achnatherium lanceolatum. *Spear bushgrass.*

Panicle diffuse; *locustæ* rather spread, upright; *spathelles* lanceolate, longer than the awn; *culm* rather branched; *leaves* linear.

Arundo q. Calamagrostis minor glumis ruffis et viridibus Petiveri, *Dillen in Raii Syn.* 401, 3.
Arundo Calamagrostis, *Lin. S. P.* 121.
Arundo epigejos, *Huds. Fl. Ang.* 54.
Calamagrostis epigejos, *With. Bot. Arr.* 123.
Calamagrostis lanceolata, *Koel. Gram.* 58.

Wood and hedges; perennial; July.

Root fibrous; *culm* erect, 4 feet high, leafy, very smooth; *leaves* slender, pointed, light green; *sheaths* long; *ligula* lanceolate; *panicle* rather upright; *locustæ* small, purple or light brown.

β. *pilosum*. *Leaves* hairy above.

LII. 93. CALAMAGROSTIS. Dioscorides. *Reedgrass.*

Spathelles alternate, very acute, longer than the spathellules; lower largest; *spathellules* membranous, often villous; lower 2 or 4-toothed; bristled between the teeth; upper 2-cut, toothed; *bristle* awlshape; *lodicule* lanceolate, not nicked, bald; *style* short, 2-parted; *stigmata* villous; *cariopsis* free, not furrowed.—*Panicle* branched, becoming effused.

1. *Calamagrostis epigejos.* *Creeping reedgrass.*

Panicle upright; *locustæ* imbricate, bundled, facing one way; *spathelles* longer than the spathellules, linear, bristled; *bristle* shorter than the hairs; *leaves* lanceolate; *ligula* long.

Arundo q. Gramen arundinaceum panicula molli spadicea majus, *Raii Syn.* 401, 2.
Gramen tomentosum arundinaceum, *Ger. em.* 9.
Calamagrostis sive Gramen tomentosum, *Park.* 1182.
Arundo epigejos, *Lin. S. P.* 120.
Arundo calamagrostis, *Huds. Fl. Angl.* 54.
Calamagrostis lanceolata, *With. Bot. Arr.* 122.

Banks and damp woods; perennial; July.

Root jointed, creeping; *culms* in bundles, upright, 6 feet high; *leaves* very long, bald, dry, glaucous; *sheaths* long, bald; *ligula* lanceolate; *panicle* manyflowered, oblong, green or blackish violet, becoming grey, woolly; *locustæ* long, drooping.

2. *Calamagrostis neglecta.* *Neglected reedgrass.*

Panicle upright, spread; *locustæ* upright, spread; *spathelles* the same length as the spathellules; *bristles* and *hairs* shorter than the spathellules; *leaves* linear; *ligula* very short, truncated.

Arundo neglecta, *Ehrh. Calam.* 118.
Arundo stricta, *Schrad. Germ.* 1, 215.
Calamagrostis neglecta, *Flor. Wett.* 1, 84.

Marshy places; perennial; June.

Root creeping; *culm* 2 feet high, ascending, slender, bald; *leaves* narrow, acute, rough above and on the edge, when dry convolute; *sheaths* bald, *ligula* not notched; *panicle* slender, 3 to 6 in. long, purplish or reddish brown; *glumes* acute, not bristled.

LIII. 94. GASTRIDIUM. Beauvois. *Lentil-grass.*

Glumes 1-flowered; *spathelles* alternate, bellied at bottom, 3 times as long as the spathellules; *lower* largest; *spathellules* leathery, hardening; *lower* 3 or 4-toothed, bristled beneath the tip; *upper* 2-cut, toothed; *style* short, 2-parted; *stigmata* hairy; *cariopsis* husked. — *Panicle* branched, contracted, approaching to a spike shape.

Gastridium australe. *Southern lentil-grass.*

Bristle much longer than the spathelles.

Gramen paniceum q. Panicum serotinum arvense, spicâ pyramidata Tournefort, *Raii Syn.* 394, 4.
Milium lendigerum, *Lin. S. P.* 91.
Agrostis australis, *Lin. Mant.* 1, 30.
Agrostis rubra, *Huds. ed.* 1, 26.
Alopecurus ventricosus, *Huds. Fl. Angl.* 28.
Agrostis ventricosa, *Gouan Hort.* 39.
Agrostis panicea, *Lamarck Enc. Meth.* 1, 58.
Agrostis lendigera, *De Cand. Syn. Fl. Gall.* 1508.

Sandy meadows and pastures; annual; August.

Root fibrous; *culm* branchy, upright, very smooth; *leaves* flat, slender, short, bald, rough; *sheaths* smooth; *ligula* long, 2-parted; *panicle* greenish white; *pedunclés* branched; *locustæ* crowded.

LIV. 95. POLYPOGON. Desfontaines. *Beards.*

Glumes 1-flowered; *spathelles* alternate, nearly equal or lower largest, much longer than the spathellules, slightly nicked and with a long bristle at the tip; *spathellules* cartilaginous; *lower* not notched, bristled below the tip; *upper* 2-cut, toothed; *bristle* of the glumelle straight, herbaceous; *style* 2-parted; *stigmata* villous; *cariopsis* free, not furrowed. —*Panicle* branched, contracted, nearly spikeshape.

1. *Polypogon littoralis.* *Shore beards.*

Spathellules smooth; *bristle* scarcely longer than the spathelles; *culm* decumbent; *root* creeping.

Agrostis lutosa, *Poiret Enc. Meth. Sup.* 1, 249.
Agrostis littoralis, *With. Bot. Arr.* 2, 129.
Polypogon littoralis, *Smith Comp. Fl. Br.* 13.

Salt marshes; perennial; August.

Culm decumbent at bottom, 12 in. high, smooth; *leaves* broad, flat, rough; *ligula* pubescent, torn; *panicle* close, lobed; *locustæ* white, green or purple at the tip.

2. *Polypogon Monspeliensis.* *Montpelier beards.*

Spathellules pubescent, hispid; *bristles* 3 times as long as the spathelles; *culm* erect; *root* fibrous.

Gramen alopecuroides, q. Alopecurus maxima Anglica Parkinson, (1166), *Raii Syn.* 396, 4.
Alopecurus altera maxima Anglica paludosa, *Ger. em.* 88.
Alopecurus Monspeliensis, *Lin. S. P.* 89.
Alopecurus aristatus, *Huds. Fl. Angl.* 28.
Phleum crinitum, *Schreb. Gram.* 151.
Agrostis panicea, *Willd. S. P.* 1, 363.
Agrostis tri-aristata, *Knapp Gram.* 23.

Damp fields on sea-coasts; annual; July and August.

Root small; *culms* many, 18 in. high, smooth, bald; *leaves* striated; *sheaths* long, bald; *ligula* torn; *panicle* upright, lobed, branched; *locustæ* numerous, crowded, 1-sided, greenish yellow.

β. *paniceus*. *Culm* 6 in. high; *panicle* very small, scarcely lobed.

Phleum crinitum, *Huds. Fl. Angl.* 28.
Alopecurus paniceus, *Lin. S. P.* 90.
Cynosurus paniceus, *Lin. S. P. ed.* 1, 73.

LV. 96. LAGURUS. Linnæus. *Hares-tail.*

Glumes 1-flowered; *spathelles* alternate, linear, rough-edged, longer than the spathellules, nearly equal or lower smaller; *lower spathellule* 2-bristled at the tip, awned on the back above the middle; *upper* not nicked; *awn* twisted, bent; *lodicule* ovate, not nicked, bald; *style* short, 2-parted; *stigmata* hairy; *cariopis* free, not furrowed. — *Panicle* branched, spikeshape.

Lagurus ovatus. *Eggshaped hares-tail.*

Spike ovate, drooping; *leaves* pubescent; *awn* twice as long as the spathelle.

Lagurus ovatus, *Lin. S. P.* 119.

Sandy fields; annual; June.

Culm solitary, 18 in. high, ascending, bald, naked above; *lower leaves* lanceolate, acute; *upper* ovate; *sheaths* long, bellied below; *ligula* oblong; *locustæ* many, crowded; *spathelles* ciliated.

G. Stipaceæ. *Rachis* panicled; *locustæ* solitary, one-flowered; *spathelles* membranaceous; *lower spathellules* soldered, leathery; *upper* not 2-keeled, involving, awned; *stigmata* 2.

LVI. 97. STIPA. Linnæus. *Feather-grass.*

Spathelles membranaceous, longer than the spathellules; *spathellules* cartilaginous; *lower* convolute, awned at the tip; *upper* not nicked; *awn* long, jointed, falling off; *lodicule* oblong, not nicked, bald; *stamens* 1 or 3; *style* short, 2-parted; *stigmata* villous; *cariopsis* free, furrowed. — *Panicle* scarcely branched, loose.

Stipa pennata. *Feathered feather-grass.*
Lower spathellule smooth at bottom.

Gramen sparteum pennatum, *Dillen in Raii Syn.* 395, 3.
Stipa pennata, *Lin. S. P.* 115.

Limestone rocks; perennial; July. A doubtful native.
Roots in tufts; *culm* not branched, 1 foot high, upright, without joints; *leaves* involute, bristlelike; *ligula* lanceolate; *locustæ* 4 or 5, very large; *awn* 6 to 10 in. long, acute, angular; *hairs* soft, pellucid.

H. PANICEÆ. *Rachis* spiked or panicled; *locustæ* solitary, or many in pairs, 1-flowered; *flowrets* 1 barren, or unisexual; *spathellules* often stronger than the spathelles, more or less cartilaginous; *lower spathellule* semi-involute, awnless or rarely awned, not keeled; *stigmata* 2.

a. *Locustæ* 1-*flowered, hermaphrodite.*

LVII. 98. MILIUM. Pliny. *Millet.*

Spathelles herbaceous, longer than the spathellules, lower largest; *spathellules* leathery, hardened, placed somewhat contrary to the spathelles; *lodicule* lanceolate, not nicked, bald; *ovary* 2-cut; *style* 2 parted; *stigmata*, aspergilliform; *cariopsis* free, 2-horned, wrapped in the persisting spathellules, not furrowed. *Panicle* branched, loose.

Millium effusum. *Loose millet.*
Locustæ ovate, spreading; *spathelles* bald; *panicle* semi-verticillate.

Gramen miliaceum, *Raii Syn.* 402, 1; *Ger. em.* 6.
Gramen miliaceum vulgare, *Park.* 1153.
Milium effusum, *Lin. S. P.* 90.
Agrostis effusa, *Lamarck Enc. Meth.* 1, 59.
Millet grass.

Damp woods; perennial; June and July.
Root rather creeping; *culm* upright, 3 feet high; *leaves* long, dark green, drooping; *sheaths* bald, round; *ligula* obtuse, torn; *panicle* large, pyramidical, few-flowered; *peduncles* naked below far up, becoming reflexed; *pedicells* thickened; *locustæ* small, green; *herb* odoriferous while drying.

LVIII. 99. MIBORA. Adanson. *Dwarf-bent.*

Spathelles alternate, truncated, fringed, longer than the spathellules, lower smallest; *lower spathellule* torn; jaggs bristled; *upper* not nicked; *ovary* beaked; beak naked; *stigmata* villous; *cariopsis* free, not furrowed.—*Spike* simple, few-flowered; *rachis* flexuose; *locustæ* nearly sessile.

Mibora verna. *Spring dwarf-bent.*

Spike filiform; *locustæ* elliptical, large and truncated at top.

Gramen minimum Anglo-Britannicum Lobelii, *Raii Syn.* K k 7.
Mibora verna, *Adanson.*
Knappia agrostidea, *Smith Fl. Br.* 1387.
Agrostis minima, *Lin. S. P.* 93.
Sturmia minima, *Sturm. Fl. Germ.* 7, 1.
Chamagrostis minima, *De Cand. Syn. Fl. Gall.* 1650.
Nardus, *Guett.*
Sturmia verna, *Persoon Ench.* 1, 72.

Sandy shores; annual; April and May.

Root fibrous; *culm* upright, 2 in. high, scaly and leafy at bottom, naked smooth and knotless above far up; *leaves* hairlike, blunt, glandular, spotted; *sheaths* very short; *ligula* long, blunt; *spike* violet, 6 or 8-flowered.

b. *Locustæ 2 or many-flowered; one barren.*

LIX. 100. DIGITARIA. Haller. *Fingers.*

Spathelles alternate; lower very small, often scarcely visible; LOWER FLOWRET neuter; *spathellule* one, herbaceous, awnless; UPPER hermaphrodite; *spathellules* rather leathery, hardening, awnless; *style* 2-parted; *stigmata* aspergilliform; *cariopsis* free, very slightly furrowed. — *Spikelets* simple, linear, digitate or in bundles, with a flattened membranaceous back; *locustæ* 1-sided; *pedicells* 2 or many-flowered.

1. *Digitaria sanguinalis.* *Bloody fingers.*

Spikelets digitate, 3, 4, or 6; inside smooth at bottom; between upright and spreading; *locustæ* elliptical; *spathelles* very unequal; *leaves* and *sheaths* slightly papillose.

Gramen dactylon latiore folio, *Raii Syn.* 399, 2.
Ischæmon sylvestre latiore folio, *Park.* 1178.
Ischæmon vulgare, *Ger. em.* 27.
Panicum sanguinale, *Lin. S. P.* 84.
Digitaria sanguinalis, *Scop. Carn.* 72.
Syntherisma vulgare, *Schrad. Germ.* 1, 161.
Paspalum sanguinale, *Poiret Enc. Meth.* 5, 33.
Cocks foot grass.

Fields; annual; July and August.

Culm lying down, branchy, smooth, joints villous; *leaves* smoothish, 7 or 9-ribbed; *sheaths* broad, often spotted; *ligula* very short, fringed; *spikelets* 1-sided; *peduncles* short, 2-flowered, one nearly sessile; *locustæ* green or purple.

2. *Digitaria glabra.* *Bald fingers.*

Spikelets mostly in pairs; inner knotted and forked at bottom; *locustæ* ovate; *spathelles* nearly equal; *sheaths* and *leaves* bald.

Panicum filiforme, *Jacquin Obs.* 3, 70.
Digitaria filiformis, *Koel. Gram.* 26.
Paspalum ambiguum, *De Cand. Syn. Fl. Gall.* 1505
Syntherisma glabrum, *Schrad. Germ.* 1, 163.
Panicum geminatum, *Gaud. in Seringe Cat.* 8.
Panicum glabrum, *Gaud. Agr. Helv.* 1, 23.

Sandy fields; annual; July and August.

Culms in tufts, smooth, shining; *leaves* short, soft, bald; *ligula* short, torn; *spikelets* facing one way; *rachis* flexuous; *peduncles* very short, 2-flowered; knots at the bottom subpellucid.

LX. 101. SETARIA. Beauvois. *Bristlegrass.*

Spathelles alternate, lower very small; *spathellules* leathery, hardened; *lower spathellule* pointed; *lower flowret* neuter or male; *lodicule* very blunt, almost sickleshaped; *ovary* nicked; *stigmata* aspergilliform; *cariopsis* free, enclosed in the persistent spathellules.—*Panicle* simple, spikeshape; *locustæ* involucrated with 2 or more bristles.

1. *Setaria verticillata.* *Whorled bristlegrass.*

Locustæ in whorls, by fours; *involucrum* 1-flowered, 2-bristled; *culm* diffused; *bristles* rough with reflexed teeth; *cariopsides* smoothish.

Gramen paniceum spicâ aspera, *Raii Syn.* 394, 3.
Panicum verticillatum, *Lin. S. P.* 82.
Pennisetum verticillatum, *Brown Prod.*
Setaria verticillata, *Pal. de Beauv.*

Corn fields; annual; August and September.

Root fibrous; *culm* branchy, ascending, rather compressed, bald, prickly above; *leaves* broad, 9-ribbed, bald; *sheaths* smoothish; *ligula* hairy; *panicle* green, with whorls at intervals at bottom; *locustæ* smoothish.

β. *breviseta.* *Bristles* of the involucrum short, and scarcely longer than the locustæ.

2. *Setaria glauca.* *Seagreen bristlegrass.*

Locustæ crowded; *involucrum* 2-flowered, 8 or 10-bristled; *bristles* with upright teeth; *cariopsides* wavy crosswise.

Panicum glaucum, *Lin. S. P.* 83.
Setaria glauca, *Pal. de Beauvois.*

River-side by Wandsworth, near London; along with echinochloa crus-galli and fagopyrum erectum; Aug. 1819.

Culm ascending; *leaves* scarcely visibly 9-ribbed, hairy on the back at bottom; *sheaths* smooth; *ligula* long, hairy; *panicle* rather thick, scarcely lobed.

3. *Setaria viridis.* *Green bristlegrass.*

Locustæ crowded; *involucrum* 2-flowered, 6 or 8-bristled; *bristles* rough with upright teeth; *cariopsides* very minutely dotted; *panicle* slightly lobed.

Gramen paniceum, spicâ simplici lævi, *Raii Syn.* 393, 1.
Panicum sylvestre spica simplici, *Park.* 1154.
Gramen panici effigie, spica simplici, *Ger. em.* 17.
Panicum viride, *Lin. S. P.* 83.
Panicum Crus-galli, *Flora Dan.* 852.
Setaria viridis, *Pal. de Beauvois.*
Panicum Germanicum, *Host Gram.* 2, 15.

Sandy fields; annual; July.

Culms ascending; *leaves* many-ribbed; *panicle* cylindrical, sometimes interrupted at bottom, white or purplish; *bristles* 2 or 3 times as long as the locustæ.

β. *major.* *Plant* larger.

LXI. 102. ECHINOCHLOA. Beauv. *Hedgehog-grass.*

Spathelles hairy, acute; lower very small, convolute at bottom; LOWER FLOWRET male or neuter; *spathellules* 2, herbaceous, hairy; *lower* either long-pointed or bristled; *upper* 2-cut, toothed; UPPER FLOWRET hermaphrodite; *spathellules* leathery, hardened; *lower* pointed; *lodicule* subovate, not nicked; *ovary* nicked; *style* 2-parted; *stigmata* aspergilliform; *cariopsis* 2-horned, free, not furrowed, inclosed in the persisting spathellules.—*Spike* branched; *spikelets* alternate; *locustæ* 1-sided.

Echinochloa Crus-galli. *Cocks-foot hedgehog-grass.*

Spikelets facing one way, alternate or in pairs, subdivided; *peduncles* 5-angled, smoothish; *leaves* linear, lanceolate.

Gramen paniceum spica divisa, *Raii Syn.* 394, 2.
Panicum vulgare, *Ger. em.* 85.
Panicum sylvestre herbariorum, *Park.* 1154.
Panicum Crus-galli, *Lin. S. P.* 84.
Echinochloa Crus-galli, *Roemer Syst. Veg.* 2, 478.
Milium Crus-galli, *Moench Meth.* 203.

Corn-fields by rivers; annual; August.

Culm smooth; *leaves* soft, broad, 7 or 9-ribbed; *sheaths* smooth, bald; *ligula* a yellow spot; *spike* doubly branched, green or purple; *peduncles* flexuous; *locustæ* ovate, acute; *spathelles* either long-pointed or with a short bristle.

β. aristata. Bristle 8 or 10 times as long as the spathelles.

Fam. VI. 11. RESTIACEÆ. R. Brown.

Perigonium free, 2 to 6-parted, rarely none; *stamens* definite, 1 to 6, when 2 or 3 opposite to the lobes of the 4 or 6-parted perigonium; *ovary* 1 or many-celled; cells 1-seeded; ovules pendulous; *pericarp* capsular or nutlike; *seeds* inverse, albuminous; perisperm fleshy, same shape as the seed; corculum basillary, lenticular, on the outside of the perisperm, opposite to the umbilicus.—*Culm* herbaceous, naked or sheathed; *leaves* simple, slender; *sheaths* cut, one edge overlapping the other; *flowers* aggregate, mostly diclinous; *bracteæ* distinct.

I. 103. ERIOCAULON. Gronovius. *Pipewort.*

Head androgynous; *bracteæ* 1-flowered, outermost often empty, involucrating; *perigonium* 4 or 6-lobed; lobes in a double series; MALE in the centre; inner lobes of the perigonium connate below; *stamens* 4 or 6; anthers 2-celled; FEMALE in the circumference; *inner lobes* of the perigonium distinct; *style* 1; *stigmata* 2 or 3; *capsule* 2 or 3-celled, 2 or 3-lobed, opening at the prominent angles; *seeds* one in each cell, pendulous.

Eriocaulon septangulare. *Seven-angled pipewort.*

Scape streaked; *leaves* cellular, compressed, swordshape, bald, shorter than the scape; *head* globose; *external bracteæ* empty, bald; *inner bracteæ* and *perigonium* hairy, fringed at the tip; *stamens* 4.

Eriocaulon septangulare, *Withering Bot. Arr.* 184.
Eriocaulon decangulare, *Lightfoot Fl. Scot.* 569.
Nasmythia articulata, *Huds. Fl. Ang.* 415.

Lakes in the Hebrides; perennial; September.

Herb reticulately cellular; *roots* simply fibrous, jointed; *scape* erect, a span high, single, 7-angled, leafless; *leaves* many, radical; *head* hemispherical, white and black; *bracteæ* scariose; *flower* snow-white with 2 black spots, tip feathered; *anthers* black; *capsule* 2-celled.

Fam. VII. 12. JUNCEÆ. De Candolle.

Flowers hermaphrodite, or diclinous; *perigonium* free, often glumaceous, 6-sepaled; *stamens* 6, rarely 3; *filaments* inserted in the base of the sepales; *anthers* 2-celled; *ovary* 1; 3-celled, many-seeded, seeds on the partitions; or 1-celled, 3-seeded, seeds at the base; *style* 1; *stigmata* 1 or 3; *capsule* 3-valved, valves partition-bearing; *spermodermis* neither crustaceous, nor black; *perisperm* cartilaginous; *corculum* enclosed. — *Root* annual or perennial, mostly fibrous; *rhizoma* often creeping; *leaves* sheathing, or approaching to sheathing; *flowers* panicled or corymbose, rarely spiked.

Flowers in a round, lateral spike.

Perigonium 6-cut; *style* 0; *capsule* 3-angular, 3-celled ..... Acorus. 104.

Flowers in a corymbus or panicle.

Filaments naked; *caps.* 1-celled, 3-seeded Luzula. 106.
Filaments naked; *caps.* 3-celled, many-seeded; *stigmata* 3 ..... Juncus. 105.
Filaments woolly; *caps.* 3-celled, many-seeded; *stigma* 1, capitate ..... Abama. 107.

I. 104. ACORUS. Dioscorides. *Sweetflag.*

Spadix cylindrical, lateral, tessellated with flowers; *perigonium* glumaceous, 6-lobed; *stamens* 6; *style* 0; *capsule* 3-angular, 3-celled, 1-seeded.—*Rhizoma* creeping; *leaves* swordshape, sheathing one another at bottom; *spadix* from the side of the leaf.

Acorus undulatus. *Wavy sweetflag.*
Floral leaf much longer than the spike.

Acorus verus, sive Calamus officinarum, *Park.* 140; *Raii Syn.* 437, 1.
Acorus verus officinis falso calamus, *Ger. em.* 62.
Acorus calamus, *Lin. S. P.* 462.
Acorus undulatus, *Stokes Bot. Mat. Med.* 2, 282.

Banks of rivers; perennial; June.

Spadix 3 in. long, close covered with florets in a spiral line; *leaves* very large, 3 or 4 feet long; *root* aromatic.

II. 105. JUNCUS. Pliny. *Junk.*

Perigonium 6-parted, glumaceous, persisting; *bracteola* 2 or 3-leaved; *stamens* 3 or 6; *stigmata* 3; *capsules* 3-celled, 3-valved; dissepiments median; *seeds* on the dissepiments. —*Plants* cespitose; *roots* fibrous or creeping, annual or perennial, in tufts; *culm* simple and leafless, or branched and leafy; sheathing at bottom; *leaves* none except the barren culms; or few, roundish, channelled, knotty, jointed, or smooth; *flower* terminal or lateral, in a panicle or corymbus; *lowest peduncle* longest; *bracteæ* membranaceous, pungent or leaflike.

a. *Culm naked.*

1. *Juncus acutus.* *Pointed junk.*

Culm naked, pungent; *panicle* lateral; *bracteæ* spinous; *capsules* mucronate, roundish, double the length of the perigonium.

Juncus acutus capitulis sorghi, *Raii Syn.* 431, 1.
Juncus maritimus capitulis sorghi, *Park.* 1192.
Juncus acutus, *Lin. S. P.* 463.
Juncus maritimus, *Lamarck Enc. Meth.* 3, 253.
Great sharp scarush.

Sandy shores of the sea; perennial; July.

Root fibrous; *stem* 3 feet high, stiff, pointed; barren stems shortest; *panicle* branched, many-flowered; *bracteæ* membranaceous, dilated at bottom, pricking at top; *flowers* clustered; *sepales* ovate, blunt; *capsule* ovate, broad, roundish, 3-seeded, mucronate, shining; *caruncle* long, at the end of the seed.

2. *Juncus maritimus.* *Sea junk.*

Culm naked, pungent; *panicle* lateral, subproliferous; *bracteæ* spinous; *capsule* oblong, acute, as long as the perigonium.

Juncus acutus maritimus Anglicus, *Park.* 1194; *Raii Syn.* 431, 2.
Juncus acutus β, *Lin. S. P.* 463.
Juncus acutus, *Lamarck Encyc. Meth.* 3, 253.
Juncus maritimus, *Smith Fl. Brit.* 375.
Lesser sharp sea rush.

Sea-shores; perennial; August.

Root fibrous; *stem* 2 feet high, glaucous; *sheaths* brown, polished; *panicle* doubly branched, slightly proliferous; *bracteæ* membranaceous at bottom, awlshape at the tip, spinous; *sepales* lanceolate, acute, jagged at the tip; *capsule* linear, oblong; *caruncle* long, at each end of the seed.

3. *Juncus glaucus.* *Seagreen junk.*

Leaves none; *panicle* lateral, upright, slender; *capsule* elliptical, rather pointed, shorter than the perigonium.

Juncus acutus, *Ger. em.* 31; *Raii Syn.* 432, 3.
Juncus acutus vulgaris, *Park.* 1193.
Juncus effusus β, *Huds. Fl. Angl.* 147.
Juncus inflexus, *Leers Herb.* 88?
Juncus glaucus, *Ehr. Gram.* 9, 83.
Common hard rush.

Pastures; perennial; July and August.

Root horizontal, creeping; *culm* in bundles, glaucous, 2 feet high, streaked above the panicle, often inflexed; *sheaths* obtuse, blackish brown, shining; *panicle* about one-third below the tip, loose, branched; *peduncles* very short, 1 or 2-flowered; *bracteæ* 2 to each flower, ovate; tip scariose, pointed; *lobes* of the perigonium awlshape, streaked, the 3 inner shortest; *capsule* 3-sided, shining; *seeds* oblong pointed.

4. *Juncus conglomeratus.* *Roundheaded junk.*

Leaves none; *panicle* lateral, conglomerate; *stamens* 3; *capsules* retuse.

Juncus lævis vulgaris panicula compactiore, *Raii Syn.* 432, 5.
Juncus lævis glomerato flore, *Park.* 1191.
Juncus conglomeratus, *Lin. S. P.* 464.
Rough-headed rush.

Damp pastures; perennial; July and August.

Root horizontal, creeping; *culms* in tufts, rather stiff, smooth, dark green, 18 in. high, slender; *sheaths* smooth, oblong, obtuse, minutely streaked, ending in a short awn; *panicle* as it were sessile, 2 or 3-inches below the apex; *pit* dilated, edge scariose; *common bracteæ* oblong, white; *universal* lanceolate, awned; *flower* small; *bracteolæ* very minute, white, ovate, acute; *lobes* of the perigonium lanceolate, 2-ribbed; *capsule* obovate, small, retuse, 3-lobed, shining, as long as the perigonium.

5. *Juncus effusus.* *Loose junk.*

Culm naked, erect; *panicle* lateral, effused, more than doubly branched; *capsule* topshape, tip rather truncate.

Juncus lævis vulgaris panicula sparsa, *Raii Syn.* 432, 4.
Juncus lævis panicula sparsa major, *Park.* 1191.
Juncus lævis, *Ger. em.* 39.
Juncus effusus, *Lin. S. P.* 464.
Common rush. Soft rush.

Moist pastures; perennial; July and August.

Root black, creeping; *culm* 3 feet high, pale green, soft, brittle, very finely streaked; *sheaths* light brown, obtuse, awned; *panicle* very much effused and divaricated at the tip; *involucrum* small, white, slightly sheathing; *flower* small; *bracteæ* very small, white, pointed; *lobes* of the perigonium lanceolate, linear; edge white; ribs 2, slightly prominent; *capsule* small, obovate, slightly retuse, very blunt, pale brown, not shining; *style* falling off.

6. *Juncus filiformis.* *Threadshape junk.*

Culm naked, threadshape, drooping; *panicle* lateral, scarcely branched, few-flowered; *capsule* roundish.

Juncus parvus, calamo supra paniculam compactam longius producto, *Raii Syn.* 432, 6.
Juncus filiformis, *Lin. S. P.* 467.
Least rush.

Mountain pastures; perennial; August.

Root creeping, horizontal, fibrous, slender, long; *culm* upright, threadlike, 6 in. high; tip pointed and channelled; light green; *sheaths* few, unequal, cut, obtuse, awned, or slightly leafy; *panicle* about the middle of the culm; *flowers* nearly sessile becoming peduncled; *involucra* small, scariose; upper long, bristlelike; *edge* of the pit broad, scariose; *bracteæ* scariose, unequal; *sepales* 3-ribbed; *capsule* globose, obtuse, shining, the length of the perigonium.

b. *Leaves channelled.*

7. *Juncus squarrosus.* *Scurfy junk.*

Culm naked; *leaves* bristlelike, channelled; *panicle* terminal, long; *capsule* obovate, obtuse.

Juncus montanus palustris, *Raii Syn.* 432, 7.
Juncus squarrosus, *Lin. S. P.* 465.
Moss rush. Goose corn.

Barren mountain heaths; perennial; June, July.

Root fibrous; *leaves* densely tufted, bristlelike, stiff, slender, pointed, smooth, dilated at bottom, sheathing; *outer sheaths* scaly, striped, broad; *culm* leafless, 12 inches long, strait, stiff, inclining to angled; *panicle* upright, branched, clustered; *floral leaves* membranaceous, cut, sheaths ending in a bristleshape leaf as long as the panicle; *peduncles* 1 or 2-flowered; *flowrets* large; *bracteæ* ovate, acute, tip scariose; *sepales* nearly equal, lanceolate, obtuse; edge scariose; *capsule* obovate, 3-sided, obtuse, mucronate.

8. *Juncus compressus.* *Flattened junk.*

Culm not branched, leafy, compressed; *leaves* linear, edge incurved; *capsule* roundish, longer than the perigonium; *panicle* terminal, shorter than the bracteæ.

Juncus parvus cum pericarpiis rotundis, *Raii Syn.* 433, 10.
Juncus bulbosus, *Lin. S. P.* 466.
Juncus compressus, *Jacq. Vindob.* 235.
Round fruited rush. Russia water-grass.

Moist fields; perennial; July.

Root creeping; *culm* upright, 12 in. high, simple; base cylindrical; tip compressed, smooth, leafy; *leaves* linear, shorter than the culm; *sheaths* cut, edge and tip scariose; *panicle* above decompound, erect, many-flowered; *floral leaves* upright, shortly sheathing; lowermost longer than the corymbus; *flower* single, at the division; *sepales* equal, brown, obtuse, shorter than the capsule, edge scariose; *capsule* round, very obtuse, mucronate.

9. *Juncus cænosus.* *Mud junk.*

Culm simple, leafy; *leaves* bristlelike, channelled; *capsule* obovate, obtuse, the length of the perigonium; *panicle* terminal, nearly simple, longer than the bracteæ.

Juncus cænosus, *Bicheno T. L. S.* 12, 309.
Mud rush.

Salt marshes; perennial; July and August.

Darker green than the preceding; *leaves* stiffer than it; *edge* of the inner sepales scariose; *capsule* rather one-sided.

10. *Juncus bufonius.* *Toad junk.*

Culm 2-forked, leafy; *leaves* angular; *flowers* solitary, sessile; *perigonium* bristlelike; *sepales* unequal; outer twice the length of the capsule.

Juncus palustris humilior erectus, *Raii Syn.* 434, 12.
Gramen junceum, *Ger. em.* 4.
Gramen junceum parvum sive Holosteum Matthioli et Gramen bufonium Flandrorum, *Park.* 1190.
Juncus bufonius, *Lin. S. P.* 466.
Toad rush. Toad grass.

Damp watery places; annual; June to August.

Root fibrous, tufted; *culm* below simple, above forked, round, leafy, 12 in. high; *leaves* shorter than the culm, slender, pale green, acute, upright; *sheaths* angular, edges whitish; *panicle* 2-forked, long; *flowers* solitary, 1-rowed, remote, lateral, and at the foot of the branches; *sepales* blackish green, ribless, edge scariose; *the outer* keeled; *inner* broad, ovate, flat; *capsules* elliptical, obtuse, half as long as the perigonium.

β. *viviparus.* *Capsule* gemmiparous.

γ. *minimus.* *Plant* not 2 in. high.

Juncus q. Gramen juncoides minimum Anglo-Britannicum, hólosteo Matthioli congener, aut bufonis gramini Flandrico Lobelii, *Dillen in Raii Syn.* 434, 13.

11. *Juncus macer.* *Slender junk.*

Leaves linear; *culm* 2-forked, racemose; *flowers* solitary, sessile; *sepales* equal, setaceous, longer than the capsule.

Juncus gracilis, *Eng. Bot.* 31, 2174; not of Brown.
Slender rush.

Alpine bogs; perennial; July.

Root fibrous, woolly; *culm* slender, 18 in. high, terminating in a few racemose forked branches, with 2 or 3 leaves at the base; *radical leaves* 1 or 2, much shorter than the culm, narrow, flat; edges rather involute, not channelled; *flower* solitary; *bracteæ* linear, leaflike, round; *valves* of the capsules blunt, nicked.

12. *Juncus trifidus.* *Three-cut junk.*

Culm naked at bottom; *capsule* oblong, as long as the perigonium; *bracteæ* foliaceous, channelled; *flowers* 3, terminal.

Juncus trifidus, *Lin. S. P.* 465.
Juncus monanthos, *Jacq. Obs.* 33.
Three-leaved rush.

Alpine bogs; perennial; July.

Root tufted; *culms* upright, numerous, slender, threadlike, 12 in. high; *sheaths* broad, streaked; upper long, adpressed, cut, slender, the tip ending in a leaflike awn; *ligula* membranaceous, fringed; *leaves* 3, terminal, upright, bristlelike, unequal, short, sheathing; *sepales* blackish green, edge broad and scariose; *the outer* lanceolate, mucronate; *the inner* short, broad, blunt; *capsule* oblong, large, shining, pointed.

13. *Juncus uliginosus.* *Bog junk.*

Leaves bristlelike, channelled; *head* 3-flowered, *flowers* sessile; *capsule* obtuse, longer than the perigonium; *culm* bulbose, rooting.

Juncus q. Gramen junceum, capsulis triangulis, minimum, *Raii Syn.* 434, 11.
Gramen junceum minor, *Ger. em.* 4.
Juncus uliginosus, *Sibthorp Fl. Ox.* 113.
Bulbous rush.

Moist sandy heaths; perennial; July and August.

Root fibrous; *culm* bulbose at bottom, leafy, slender, branching above; branches divaricated; *leaves* crowded, bristlelike, smooth, cellular; *cells* in a double row, alternating; *heads* 3-flowered, lateral and terminal, sessile; *bracteæ* small, scariose, shorter than the flowers; *sepales* equal, lanceolate, pointed, 3-ribbed; *edge* scariose, dark brown red, keel green; *capsule* acute, 3-sided, obtuse, opake, rather longer than the perigonium.

β. *viviparus. Capsule* gemmiparous, *bracteæ* lengthened out like the leaves.

Juncus uliginosus, *With. Bot. Arr.* 348.

14. *Juncus supinus.* *Downlying junk.*

Leaves channelled, threadshape; *head* 3-flowered, terminal, facing one way; *bracteæ* bristlelike, leafy; *capsule* nearly as long as the perigonium.

Juncus supinus, *Hoff. Germ.* 125.
Juncus capitatus, *Weigel Obs. Bot.* 28.
Schœnus minimus, *Symons Syn.* 197.
Juncus verticillatus β, *Willd. S. P.* 2, 212.
Dwarf rush.

Bogs; perennial; July.

Root fibrous, bulbose at bottom; *culm* erect, simple, 3 in. high; *leaves* threadshape, channelled, cellular; *flowers* 3 together, terminal, clustered; *bracteæ* bristlelike, one or more, frequently leaflike, longer than the flowers, and forcing them on one side; *lobes* of the perigonium lanceolate, chesnut colour; *capsule* oblong, rather obtuse, 3-sided.

c. *Leaves jointed.*

15. *Juncus fluitans.* *Floating junk.*

Leaves cylindrical, bristlelike, rather nodosely jointed; *heads* 3-flowered; *flowers* sessile; *culm* bulbose, slender, rooting; *capsule* obtuse, longer than the perigonium.

Juncus uliginosus γ, *Bicheno T. L. S.* 316.
Juncus fluitans, *La Marck Encyc. Method.* 3, 270.
Juncus uliginosus, *Fl. Dan.* 817.
Juncus subverticillatus, *Hoffm. Germ.* 3, 166.

Watery places; perennial; July.

Very like isolepis fluitans; *culm* slender, feeble, floating; *leaves* long, threadshape, slender; *panicle* spreading, 3 or 4-flowered, subproliferous.

16. *Juncus triglumis.* *Three-chaffed junk.*

Leaves subulate; *head* terminal; *flowers* 3, sessile; *capsules* rather obtuse, as long as the perigonium; *bracteæ* 3-leaved, as long as the flowers.

Scirpus q. Juncello accedens graminifolia planta capitulis armeriæ proliferæ Lhwyd, *Raii Syn.* 430, 9 *.
Juncus triglumis, *Lin. S. P.* 467.

Boggy places; perennial; July, August.

Culms 6 in. high; *leaves* rather jointed, furrowed, channelled; *flowers* large, erect, crowded; *bracteæ* ovate, ribbed, light brown; 2 outer largest, opening so as to make the flowers stand all in the same plane; *sepales* nearly equal, obtuse, the outer brownish green, the inner paler; *capsule* elliptical, mucronate, obtuse, 3-sided.

17. *Juncus biglumis.* *Two-chaffed junk.*

Leaves awlshape; *head* terminal; *flowers* 2, one pedicelled; *capsule* longer than the perigonium, tip retuse; *bracteæ* 2-leafed, unequal; upper leaflike.

Juncus biglumis, *Lin. S. P.* 467.

Moist alpine meadows; perennial; August.

Culm 3 in. high; *leaves* jointed; *sheaths* broad, scariose; *flowers* large, facing one way, one above the other; *bracteæ* 2, unequal; *upper* leaflike, erect, acute, doubly striated, dark chesnut; *lower* shorter, ovate, rather acute; *sepales* acute, dark chocolate-colour; *capsule* long, turbinate, retuse, 3-sided; *caruncle* elongated at each end of the seed.

18. *Juncus castaneus.* *Chesnut junk.*

Leaves flat, stem-clasping; *head* terminal, mostly in pairs, many-flowered, leafy at bottom; *bracteæ* acute; *capsule* longer than the perigonium.

Juncus castaneus, *Smith Fl. Brit.* 383.
Juncus Jacquini, *Symons Syn.* 87.

Micaceous rocks; perennial; July.

Root creeping; *culm* upright, 12 in. high, single, leafy; *leaves* upright, compressed, jointed; *sheath* keeled; *heads* 3 to 8-flowered, shining, blackish; *bracteæ* membranaceous, linear; *capsules* oblong, pointed, 3-celled; *caruncle* of the seed awlshape, at each end.

19. *Juncus subverticillatus.* *Whorled junk.*

Stem-leaves awlshape, knotted, jointed; *panicle* corymbose; *head* mostly 5-flowered, fasciculately whorled; *capsule* as long as the perigonium, obtuse; *perigonium* awned; *culm* lying down.

Juncus subverticillatus, *Willd. S. P.* 2, 212.
Lesser jointed wood rush-grass. Park. 1189.

Marshy places; perennial; July, August.

Culm slightly bulbose at bottom, sarmentose; 4 in. high, cylindrical, fistulous; *radical leaves* threadlike, jointed; *stem-leaves* larger, awlshape, knotty, jointed; *sheaths* scariose; *flowers* in a corymbus, appearing proliferous, light brown; *sepales* lanceolate, pointed, stiff; *capsules* light brown, shining, mucronated.

20. *Juncus acutiflorus.* *Pointed-flower junk.*

Leaves knotty, jointed; *panicle* terminal, very much divided: *sepales* lanceolate, pointed, *capsule* pointed, as long as the perigonium.

Juncus nemorosus, folio articuloso, *Raii Syn.* 433, 9.
Gramen junceum sylvaticum, *Ger. em.* 22.
Gramen junceum aquaticum magis sparsa paniculâ, *Park.* 1269, 4.
Juncus acutiflorus, *Ehrh. Gram.* 66.
Juncus articulatus, *Relhan Fl. Cant.* 138.
Juncus nemorosus, *Sibthorp Fl. Ox.* 114.
Juncus sylvatica, *Willd. S. P.* 2, 211.

Watery places in woods; perennial; June, July.

Root fibrous, creeping; *culm* rather hard, leafy, slender, upright, slightly compressed, smooth, 3 feet high, joints fistular; *leaves* 3 or 4, on the stem, sheathing, compressed, smooth; *panicle* diffuse; branches long, slender, smooth; *capsules* 3-sided, ovate, oblong, light brown, shining.

21. *Juncus lampocarpus.* *Varnished junk.*

Leaves compressed; *panicle* terminal, compound, upright; *sepales* unequal, inner obtuse; *capsule* 3-sided, acute, shining, longer than the perigonium.

Juncus foliis articulatis, floribus umbellatis, *Raii Syn.* 433, 8.
Gramen aquaticum, *Ger. em.* 12.
Gramen junceum aquaticum Bauhini, *Park.* 1270.
Juncus lampocarpus, *Davis T. L. S.* 10, 13.
Juncus articulatus, *Willd. S. P.* 2, 211.
Juncus compressus, *Relh. Fl. Cant.* 141.
Shining-fruited rush.

Boggy places; perennial; July, August.

Root creeping; *culm* 1 foot high, compressed, many-leaved; *leaves* compressed, sheathing, distinctly jointed, stiff, pointed; *panicle* terminal, upright; branches stiff, nearly simple; *flowers* 5 or 6 together, sessile.

22. *Juncus obtusiflorus.* *Bluntflowered junk.*

Leaves round, knotted, jointed; *panicle* very much divided above, divaricated; *sepales* elliptical, obtuse, the length of the capsule.

Gramen junceum sylvaticum, *Ger. em.* 22, 9.
Juncus obtusiflorus, *Ehr. Gram.* 76.
Juncus articulatus β, *Smith Fl. Brit.* 379, excluding the synonyms.

Stagnant watery places; perennial; July, August.

Root horizontal; *culm* upright, very smooth, fistulous, 3 feet high; *leaves* 2 or 3, long, thick, stiff, cylindrical, smooth, jointed, cellular; *sheaths* short, pale: *ligula* short, obtuse, 2-cut; *corymbus* terminal, very much branched, entangled; ultimate ones often retracted; *flowers* small, 4 or 5 in a head; *edge* of the sepales scariose, broad, brownish; *capsules* light brown, shining, oval, straight, blunt, mucronate.

III. 106. LUZULA. *Luzula.*

Perigonium 6-parted, glumaceous, persisting; *bracteolæ* 3 or 4, glumaceous; *stamens* 6, short; *stigmata* 3; *capsule* 1-celled, 3-valved; *seeds* 3, affixed at the base.—*Root* perennial; *culm* upright, jointed below the sheath, round, smooth, more or less leafy; *leaves* flat, lanceolate, edge fringed with hygrometical hairs; *sheaths* smooth; *ligula* pilose; *corymbus* terminal, many-flowered.

1. *Luzula pilosa.* *Hairy luzula.*

Corymbus very much divided, becoming divaricated; *flowers* solitary; *sepales* ovate, acute; *capsule* cordate, obtuse; *caruncle* of the seed hooked.

Gramen nemorosum hirsutum vulgare, *Raii Syn.* 416, 3.
Gramen nemorosum hirsutum, *Ger. em.* 17.
Gramen nemorosum hirsutum majus, *Park.* 1184.
Juncus pilosus, *Lin. S. P.* 468.
Juncus nemorosus, *Lam. Enc. Meth.* 3, 273.
Juncus luzulinus, *Vill. Delph.* 2, 235.
Juncus vernalis, *Ehrh. Gram.* 109.
Luzula vernalis, *De Cand. Syn. Fl. Gall.* 182.
Luzula pilosa, *Willd. Hort. Ber.* 393.
Hairy wood-rush. Hairy wood-grass.

Woods and hedges; perennial; April and May.

Roots in tufts, stoloniferous; *culm* 12 in. high, slender, simple; *leaves* broad; *corymbus* spreading; *flowers* lateral and terminal; *sepales* acute, dark brown, edge white; *capsules* inversely heartshaped, narrowed towards the middle.

2. *Luzula Forsteri.* *Forster's luzula.*

Corymbus slightly divided, irregular; *flowers* solitary, upright; *sepales* and *capsules* ovate, acute; *caruncle* of the seed erect, obtuse.

Juncus Forsteri, *Smith Fl. Brit.* 1695.
Luzula Forsteri, *De Cand. Syn. Fl. Gall.* 1824.

Chalky woods and hedges; perennial; May.

Root fibrous; *culm* 12 in. high, threadshape; *leaves* slender, upper largest; *corymbus* terminal, erect, slightly branched; *sepales* lanceolate, pointed, as long as the capsule, light brown; *capsule* mucronate; *seeds* oval; *caruncle* rather straight, obtuse.

3. *Luzula sylvatica.* *Wood luzula.*

Corymbus divided, loose; *flowers* 3 together; *sepales* awned, longer than the capsule; *caruncle* obtuse.

Gramen nemorosum hirsutum latifolium maximum, *Raii Syn.* 416, 4.
Juncus pilosus δ, *Lin. S. P.* 468.
Juncus pilosus, *Vill. Delph.* 2, 234.
Juncus montanus, *Lamarck Enc. Meth.* 3, 237.
Juncus maximus, *Willd. S. P.* 2, 218.
Juncus sylvaticus, *Huds. Fl. Angl.* 131.
Great broad-leaved wood-grass.

Shady stony places; perennial; May and June.

Root fibrous; *culm* 2 feet high, upright, leafy, striated; *leaves* broad, light green, 8-ribbed; *panicle* cymose, repeatedly divided, often divaricated; *flowers* small, above fasciculate; *bracteæ* linear, hairy, acute; *sepales* equal, somewhat longer than the capsule, acuminate; *capsule* ovate, mucronate; *caruncle* elliptical, sitting close to the seed.

4. *Luzula campestris.* *Field luzula.*

Spikes ovate, unequally peduncled, intermediate ones sessile; *bracteæ* short; *sepales* lanceolate, longer than the capsule, mucronate; *capsule* obtuse.

Gramen nemorosum hirsutum q. Gramen exile hirsutum, *Ger. em.* 16; *Raii Syn.* 416, 1.
Gramen nemorosum hirsutum minus angustifolium, *Park.* 1185.
Juncus campestris, *Lin. S. P.* 468.
Luzula campestris, *De Cand. Syn. Fl. Gall.* 1827.
Small hairy wood-grass.

Meadows and pastures; perennial; April, May.

Root fibrous, creeping; *culm* 4 in. high; *leaves* linear, flat, 5-ribbed; *flowers* in spikes, sessile, 10 or 12 together; head ovate, upright, afterwards nodding; *sepales* shining, keeled, edge white; *capsule* obovate, obtuse, 3-sided; *seeds* kidneyshape, rather rough, ash-green, opake; *caruncle* enlarged at the bottom of the seed, attaching it to the receptacle.

5. *Luzula congesta.* *Crowded luzula.*

Spikes many, ovate, umbelled; *bracteæ* short; *sepales* lanceolate, longer than the capsule, mucronate; *capsule* obtuse.

Juncus congestus, *Thuil. Par.* 2, 1, 179.
Juncus liniger, *With. Bot. Arr.* 2, 436.
Luzula campestris β, *De Cand. Syn. Fl. Gall.* 1827.
Luzula erecta β, *Bart. Essai*, 136.
Luzula congesta, *Forster Fl. Tonbridgensis*, 44.
Flaxen rush.

Turfy bogs; perennial; June.

Root fibrous, in tufts; *culm* upright, 12 in. high; *leaves* with long hairs at the base; *umbel* large, compact; *spikes* 7 or 9, upright; *peduncles* long; *flowers* reddish brown; *capsules* large.

6. *Luzula multiflora.* *Many-flowered luzula.*

Spikes ovate, rather umbelled, very loose; *peduncles* stiff; *sepales* lanceolate, acute, half as long as the capsule.

Juncus intermedius, *Thuil. Par.* 2, 1, 178.
Juncus erectus, *Per. Syn.* 1, 386.
Luzula erecta α, *Des Jour.* 1, 156.
Luzula campestris, *De Cand. Syn. Fl. Gall.* 1827.
Juncus multiflorus, *Hoffm. Germ.* 1, 169.
Luzula multiflora, *Lejeune Spa*, 169.

Turfy bogs; perennial; June.

Root fibrous; *culm* upright, 6 in. high; *flowers* reddish brown, in a corymbus of 5 or 6 unequally peduncled spikes; *bracteæ* short; *sepales* reddish brown, edges white.

7. *Luzula spicata.* *Spiked luzula.*

Spike racemose, drooping, divided; *spikelets* sessile, bracteate; *capsule* acute, the length of the sepales.

Juncus spicatus, *Lin. S. P.* 468.
Luzula spicata, *Bicheno T. L. S.* 12, 366.
Luzula spicata, *De Cand. Syn. Fl. Gall.* 1828?

Scotch alps; perennial; July.

Root fibrous, in tufts; *culm* simple, 8 in. high, slender, leafy; *leaves* linear, channelled, hairy at the base; *stem-leaves* convolute or subulate; *spike* terminal, nodding, cylindrical, oblong, obtuse; *spikelets* sessile, many-flowered, bracteated; *bracteæ* pale, lanceolate; *sepales* lanceolate, acuminate; *capsule* pointed, 3-sided.

IV. 107. ABAMA. Adanson. *Bastard-asphodel.*

Perigonium 6-sepaled; *stamens* 6, opposite to the sepales; *filaments* woolly, persistent; *anthers* linear; *ovary* pyramidical; *style* short; *stigma* capitate; *capsule* 3-celled; *valves* 3, bearing the dissepiments; *seeds* numerous, ovate, oblong, carunculated, imbricated on the inner margin of the dissepiments.—*Root* fibrous, aggregate; rhizoma creeping, threadlike; *radical leaves* equitant, ensiform, ribbed, sheathing at bottom, edge membranaceous; *culm* ascending, simple, slightly leafed; *stem-leaves* 1 to 3, alternate, short, submembranaceous; *flowers* spiked, persistent, peduncled, yellow; *bracteæ* lanceolate, 2 to each peduncle.

Abama ossifragum. *Bonebreaking bastard-asphodel.*
Leaves swordshape; *flower* loosely spiked, nearly sessile.
Phalangium Anglicum palustre iridis folio, *Raii Syn.* 375, 1.
Asphodelus Lancastriæ verus, *Ger. em.* 97.
Anthericum ossifragum, *Lin. S. P.* 446.
Narthecium ossifragum, *Huds. Fl. Angl.* 145.
Abama ossifragum, *De Cand. Fl. Fr.* 1852.
Lancashire bastard-asphodel.

Turfy bogs; perennial; July, August.

Culm 10 in. high, smooth; *spike* upright; *peduncles* alternate, sometimes two together, upright, angular; *bracteæ* concave; *ovary* oblong, awlshape at the tip; *capsule* deep yellow, shining.

Fam. VIII. 13. COLCHICACEÆ. De Candolle: *Merenderæ*, Mirbel: *Melanthaceæ*, R. Brown: *Juncorum et liliorum genera quædam*, Jussieu.

Flowers hermaphrodite; *perigonium* petaloid, 6-sepaled; sometimes tubular at bottom; *sepales* before expanding involute; *stamens* 6, adnate to the sepales; *anthers* often inverted; *ovary* one 3-celled (or 3?), many-seeded; *style* 3-cut or parted; *stigmata* 3; *capsule* 3-partite, 3-valved; edge of valves inflected and forming the dissepiments; *seeds* many, affixed to the inner marginal suture; *spermodermis* simple, membranaceous, neither black nor crustaceous; *corculum* inclosed; *perisperm* fleshy.

Plants have a strong action on the human body, as emetics, purgatives, and caustics; so as to require the utmost caution in using them as medicines.

Perigonium 6-sepaled; *involucrum* 3-leaved; *flower* pedicelled ..... Tofieldia. 108.
Base of the perigonium tubular, radical. Colchicum. 109.

I. 108. TOFIELDIA. Hudson. *Tofield.*

Perigonium 6-sepaled; *involucrum* small, 3-cut at the bottom; *stamens* smooth; *anthers* roundish, incumbent; *style* vertical, short; *capsules* 3, joined at the base; *seeds* many, long, acute.—*Root* fibrous, perennial; *rhizoma* creeping; *stem* upright, naked or with 1 or 2 short leaves; *leaves* equitant, swordshape, ribbed, sheathing at bottom, edge membranaceous; *flowers* spiked or capitate, yellow or white; *peduncle* solitary, bracteate.

Tofieldia palustris. *Marsh tofield.*

Spike ovate obtuse; *scape* smooth, threadlike; *sepales* obovate, obtuse; *ovary* roundish; *flowers* nearly sessile.

Phalangium Scoticum palustre minimum iridis folio, *Raii Syn.* 375, 2.
Anthericum calyculatum, *Lin. S. P.* 447.
Helonias borealis, *Willd. S. P.* 2, 274.
Tofieldia palustris, *Huds. Fl. Angl.* 157.
Nathericum pusillum, *Michaux Am. Bor.* 1, 209.
Scotch asphodel. Lancaster asphodel.

Mountain bogs; perennial; July to September.

Stem 12 in. high; *spike* solitary, obtuse, dense; *flowers* yellowish; *bracteæ* ovate, very small, concave.

II. 109. COLCHICUM. Dioscorides. *Meadow-saffron.*

Perigonium tubular, radical; *limb* campanulate, 6-parted; *stamens* inserted at the top of the tube; *anthers* oblong, versatile; *ovary* 1; *styles* 3, very long; *stigmata* 3, hooked; *capsules* 3-lobed, lobes inflated, upright, joined at the base; *seeds* many; *corculum* opposite to the umbilicus. — *Bulb* ovate, 1 or 2 new ones arising from beneath the persistent tunics of the old plant in whose half-embracing sinus they are lodged; *tunics* hard, coriaceous; *spathe* cylindrical, cloven on one side of the apex; *flowers* 2 to 6, half produced out of the spathe; *fruit* becoming peduncled; *leaves* coming out with the fruit, a long time after the flower; *radical leaves* sheathing; *stem-leaves* half-embracing; *stems* frequently two, one flowering, fruitful, as above; the other slender, above the first, seldom flowering.

Colchicum autumnale. *Autumnal meadow-saffron.*

Leaves flat, broad, lanceolate; *sepales* ovate; *bulbs* rather many-flowered; *flowers* appearing long before the leaves.

Colchicum commune, *Raii Syn.* 373.
Colchicum Anglicum purpureum, *Ger. em.* 127.
Colchicum autumnale, *Lin. S. P.* 485.

Meadows; perennial; flowering in August and September, fruiting in the following May and June.

Leaves obtuse, 9 inches long, 2 inner narrower; *flowers* purple, 3-sided.

β. *album.* *Flowers* white.

Colchicum Anglicum album, *Ger. em.* 127.

γ. *serotinum.* *Flowers* late, whitish green, long, abortive.

Bulb violently emetic and purgative in the spring, less so in autumn: reputed a specific in gout, but requires caution in its exhibition.

Fam. IX. 14. LILIACEÆ. Jussieu.

Perigonium petaloid, free, 6-sepaled, regular; *stamens* 6, opposite to the lobes of the perigonium; *anthers* versatile; *ovary* 1, free; *style* 0; *stigmata* 3; *capsule* 3-celled, 3-valved; partitions on the middle of the valves; *seeds* many, flat, in a horizontal double series, affixed to the central margin of the partitions; *spermodermis* double; *testa* crustaceous, black, brittle; *tegmen* membranaceous; *corculum* included, toward the hilum; *perisperm* rather cartilaginous.—*Herb* bulbose; *leaves* radical or cauline, sheathing or sessile, ribbed; ribs parallel, simple; *flowers* naked, terminal, solitary, or racemose.

Perigonium not nectariferous at the base TULIPA. 110.
Perigonium nectariferous ..... FRITILLARIA. 111.

I. 110. TULIPA. Gesner. *Tulip.*

Perigonium bellshape, 6-parted; lobes not nectariferous at bottom; *stigmata* sessile, thick; *capsule* oblong, 3-sided; *corculum* one-third the length of the perisperm.—*Bulb* ovate, truncated, emitting the young bulbille on a long peduncle; *stem* solitary, leafy below the middle, sometimes bent down before flowering; *leaves* 3 or 4, tubular and sheathing at bottom; *flowers* solitary, upright or drooping, yellow or variegated; *bracteæ* 0.

Tulipa sylvestris. *Wild tulip.*

Stem 1-flowered, smooth; *flower* somewhat drooping; *lobes* lanceolate, pointed, bearded, at the tip; *stamens* hairy at bottom.

Tulipa Bononiensis, *Ger. em.* 138.
Tulipa sylvatica, *Lin. S. P.* 438.
Tulipa Turicia, *Roth. Cat. Bot.* 1, 45.
Italian tulip, or Dalmatian cap.

Old chalk-pits; perennial; April.

Stem upright, 12 in. high; *leaves* glaucous; *flowers* before they open drooping, then become upright, sweet-scented, yellow.

II. 111. FRITILLARIA. Lobel. *Fritillary.*

Perigonium cupshape, 6-parted; lobes flat at bottom, keeled, with a linear nectariferous pit on the inside; *stamens* as long as the perigonium; *capsule* 3-sided, blunt; *corculum* not one-fourth so long as the perisperm.—*Combus* smooth, round, solid? one above the other; *stem* upright, from one side of the bulb, simple; *flower* terminal, solitary, or on a loose raceme; *bracteæ* none.

Fritillaria tessellata. *Chequered fritillary.*

Leaves all alternate, linear, channelled; *stem* 1-flowered.

Fritillaria variegata, *Ger. em.* 149.
Fritillaria Meleagris, *Lin. S. P.* 436.
Fritillaria tesselata, *Salisb. Prod.* 236.
Fritillaria graminifolia, *Stokes B. M. M.* 232.
Chequered Daffodil. Snakes-heads. Guinea-hen flower.

Moist fields and meadows; perennial; April.

Stem 18 in. high, upright, smooth, leafy; *leaves* rather acute; *flowers* drooping; *fruit* upright and much lengthened after flowering.

β. *serotina.* *Flowers* variegated, purple and black.

γ. *multiflora.* *Stem* 2 or 3-flowered.

δ. *alba.* *Flowers* white.

ε. *lutea.* *Flowers* yellow.

Fam. X. 15. ASPHODELEÆ. *Asphodelearum maxima pars,* Brown. *Liliacearum sectio,* De Candolle. *Asphodeli,* Jussieu.

Perigonium petaloid, 6-parted or 6-cut, regular, free; *stamens* 6, hypogynous, opposite to the lobes; outer lobes sometimes dissimilar; *ovary* 1, free, 3-celled, many-seeded; *style* 1; *stigma* 1, not nicked; *capsule* 3-celled, 3-valved; partitions on the middle of the valves; *seeds* roundish or angular, mostly in a double series, affixed to the central margin of the partitions; *spermodermis* single, crustaceous, black, brittle; *corculum* inclosed; *perisperm* fleshy.—*Herb* bulbose; *leaves* radical, sometimes cauline, sheathing, ribbed; ribs simple, parallel; *flowers* bracteated or naked, terminal, solitary, racemose, or umbelled.

1. *Filaments smooth, not tricuspidate, inserted at the base of the perigonium.*

Root fibrous; *scape* 1-flowered;
filaments threadlike, not dilated ..... PHALANGIUM 112.
Root bulbose; *flowers* yellow, umbelled;
filaments threadlike, not dilated ..... GAGEA. 118.
Root bulbose; *flowers* blue, racemose;
filaments dilated, awlshape ..... SCILLA. 116.
Root bulbose; *flowers* whitish, racemose;
filaments dilated at bottom ..... ORNITHOGALUM. 117.
Root bulbose; *flowers* umbelled;
filaments dilated at bottom; *spatha* 2-leaved .. CEPA. 121.

2. *Filaments smooth, not tricuspidate, attached above the base of the perigonium; root bulbose.*

Perigonium 6-sepaled, persisting;
flowers racemose; *bracteæ* 2-leaved ... HYACINTHUS. 114.
Perigonium 6-sepaled, persisting;
flowers umbelled; *spatha* 3-leaved ..... MOLY. 119.
Perigonium 6-toothed, ovate, ventricose;
flowers racemose..... MUSCARI. 113.

3. *Filaments alternately* 3-*cuspidate, inserted at the base of the perigonium.*

Flowers racemose; *spathe* none;
bracteæ 1, at the bottom of the peduncle. HONORIUS. 115.
Flowers umbelled; *spathe* 2-valved;
bracteæ none..... ALLIUM. 120.

A. *Flowers* solitary; *perigonium* 6-sepaled; *root* fibrous.

I. 112. PHALANGIUM. Dioscorides. *Spiderwort.*

Perigonium 6-sepaled, spreading; *stamens* 6; *filaments* smooth, threadshape, equal, inserted in the base of the sepales; *stigma* 3-sided; *seed* 3-sided.—*Root* fibrous; *leaves* sheathing; sheaths membranaceous; *upper leaves* alternate, stem-clasping, lanceolate; *flowers* terminal, white, veined; *bracteæ* none.

Phalangium serotinum. *Late spiderwort.*

Leaves 2, thick, semicylindrical; upper lanceolate, dilated, incurved, subulate; *scape* 1-flowered; *capsule* oblong, crowned.

Bulbosa Alpina juncifolia, pericarpio unico erecto in summo cauliculo dodrantali, *Raii Syn.* 374, 1.
Anthericum serotinum, *Lin. S. P.* 444.
Bulbocodium serotinum, *Lin. S. P. ed.* 1, 2994.
Ornithogalum striatum, *Willd. S. P.* 2, 112.
Phalangium serotinum, *Lamarck Enc. Meth.* 3, 241.
Mountain spiderwort.

Alpine rocks; perennial; June.

Stem 8 in. high; *root* clubshape, covered with membranaceous scales; *leaves* 2 together, involved in awlshape scales; *upper leaves* 3 or 4, alternate, nearly embracing; *flower* terminal, whitish green; dorsal rib purplish.

β. *multiflorum. Flowers* 3 or 4.

B. *Flowers* spiked; *perigonium* tubular at bottom; *plant* bulbose.

II. 113. MUSCARI. Clusius. *Bluebell.*

Perigonium ovate, inflated in the middle, 6-toothed; *stamens* 6; *filaments* simple, smooth, threadshape, inserted in the middle of the perigonium; *stigma* 3-sided; *capsule* 3-sided, angles prominent; *seed* ovate; *corculum* straight, the length of the perisperm.—*Bulb* truncated; *flowers* in spikes, blue or white.

Muscari racemosum. *Racemose bluebell.*

Flowers ovate, 6-furrowed, crowded; the upper sessile, abortive; *leaves* linear, keeled, lax, dependent.

Hyacinthus muscarius, *Lin. S. P.* 455.
Muscari racemosum, *Curtis Bot. Mag.* 122.

Fields and walls; perennial; May.

Scape 9 in. high; *spike* 40 to 50 flowered; *flowers* blue or white; smelling like starch.

III. 114. HYACINTHUS. Theophrastus. *Hyacinth.*

Perigonium 6-cut, persistent; *sepales* revolute, connivent at bottom into a tube; *stamens* 6; *filaments* single, threadlike, inserted about the middle of the perigonium; *stigma* obtuse; *capsule* 6-sided; *seeds* roundish; *corculum* straight, as long as the perisperm.—*Bulb* ovate, tunicated; *leaves* linear; *scape* simple; *spike* terminal; *flowers* pendulous, mostly blue; *bracteæ* 2, linear, at the base of the peduncle.

Hyacinthus nutans. *Drooping hyacinth.*

Leaves flaccid, linear, shorter than the scape; *raceme* before flowering drooping.

Hyacinthus nutans, *Ger. em.* 99; *Raii Syn.* 373, 2.
Hyacinthus Anglicus, Belgicus, vel Hispanicus, *Park. Paradise*, 122.
Hyacinthus non-scriptus, *Lin. S. P.* 453.
Hyacinthus pratensis, *Lamarck Enc. Meth.* 3, 190.
Hyacinthus cernuus, *Thuill. Par.* 2.
Scilla nutans, *Stokes Bot. Mat. Med.* 2, 248.
Scilla festalis, *Salisb. Prod.* 242.
English hyacinth. Harebells.

Woods, hedges and pastures; perennial; May and June.

Bulbs large; *leaves* many, keeled; *scape* 18 in. high, upright; *flowers* facing one way, fine-scented.—*Roots* when fresh poisonous, may be converted into starch, or prepared as a substitute for gum Arabic.

β. *albus.* *Flowers* white.

IV. 115. HONORIUS. *Star of Naples.*

Perigonium 6-sepaled, connivent at bottom, spreading at top, persisting; outer sepales herbaceous, inner petaloid; *stamens* 6, unequal, inserted at the base of the lobes of the perigonium; *filaments* dilated, cohering, bellshape; the 3 on the outer sepales longer, 2-horned; *style* 3-sided, 3-grooved; *stigma* blunt; *capsule* ovate, 3-sided; *seeds* many, roundish; *hilum* sunk, or not tubercular; *corculum* central, curved, half as long as the perisperm; *spermodermis* simple.—*Bulb* tunicate; *leaves* linear; *scape* upright; *flowers* racemose, white, outside streaked with green; *peduncles* alternate, bracteate; *bracteæ* slightly sheathing, single.

Honorius nutans. *Drooping star of Naples.*

Flowers racemose, facing one way, drooping; *leaves* strapshape, deep green, shorter than the scape; *bracteæ* acute, shorter than the flowers.

Ornithogalum Neapolitanum, *Ger. em.* 168, 9.
Ornithogalum nutans, *Lin. S. P.* 441.
Star-flower of Naples, Park. Paradise, 133.

Fields and meadows; perennial; May.

Bulb ovate; *leaves* pale, acute; *scape* cylindrical; *flowers* 8 or 10, silvery white.

V. 116. SCILLA. *Squill.*

Perigonium 6-sepaled, spreading, falling off; *stamens* 6; *filaments* simple, threadshape, smooth, inserted at the bottom of the sepales; *stigma* obtuse; *capsule* obtuse, 3-sided;

seeds many, roundish.—*Bulb* solid or tunicated; *leaves* linear, keeled; *scape* upright; *flowers* peduncled, racemose or corymbose, blue or white; *bracteæ* 1-leafed, lanceolate, at the base of the peduncle; or none.

1. *Scilla autumnalis.* *Autumn squill.*

Leaves threadshape, linear, shorter than the scape; *flowers* corymbose; *peduncle* ascending, as long as the flower; *bracteæ* 0; *root* tunicated.

Hyacinthus autumnalis minor, *Ger. em.* 110; *Park. Paradise*, 132; *Raii Syn.* 373, 3.
Scilla autumnalis, *Lin. S. P.* 443.
Anthericum autumnale, *Scop. Carn.* 415.
Ornithogalum autumnale, *Lamarck Fl. Fr.* 3, 274.
Autumn star-hyacinth.

Dry barren pastures; perennial; September.

Bulb ovate; *leaves* spreading, many; *scape* twice as long as the leaves, upright; *flowers* come out before the leaves, bluish purple; *stamens* blue.

2. *Scilla bifolia.* *Two-leafed squill.*

Leaves 2, lanceolate, linear, rather shorter than the scape; *flowers* racemose, nearly upright; *bracteæ* none; *root* solid.

Hyacinthus stellatus Fuschii, *Ger. em.* 97; *Raii Syn.* 372, 1.
Hyacinthus stellatus vulgaris sive bifolius Fuschii, *Park. Parad.* 126.
Scilla bifolia, *Lin. S. P.* 445.
Anthericum bifolium, *Scop. Carn.* 414.
Ornithogalum bifolium, *Lamark Fl. Fr.* 3, 274.
Star-hyacinth.

Woods; perennial; March and April.

Bulb ovate; *leaves* obtuse, slightly keeled; *corymbus* inclining to racemose; *peduncles* long; *flowers* 4 to 10, mostly pointing one way, blue; *anthers* brownish.

3. *Scilla verna.* *Spring squill.*

Leaves linear, thick, slightly channelled, upright, 2 or more, shorter than the scape; *flowers* few, racemose, umbelled; *bracteæ* lanceolate, obtuse, persisting; *root* truncated.

Hyacinthus stellaris vernus pumilus Lobelii in Adv. *Raii Syn. Ind. plant. dub.*
Hyacinthus primus, *Raii Syn.* 372, omitting some synonyms.
Scilla verna, *Huds. Fl. Angl.* 142.
Scilla bifolia, *Lightfoot Fl. Scot.* 181.
Scilla umbellata, *Ram Bull. Philom.* 130.

Sea clifts; perennial; April.

Leaves seldom more than two; *scape* round; *flowers* 3 to 6, blue; *bracteæ* as long as the peduncles.

VI. 117. ORNITHOGALUM. *Star of Bethlem.*

Perigonium 6-sepaled, connivent at bottom, spreading at top, persisting; *stamens* 6, equal; *filaments* inserted on the base of the sepales; those inserted on the 3 outer dilated at bottom, the others threadshape, smooth; *stigma* bluntly 3-sided; *capsule* 3-sided, blunt; *seeds* many, roundish; *umbilicus* tubercular; *corculum* central, curved, half as long as the perisperm; *spermodermis* simple.—*Bulb* tunicated; *leaves* radical, linear, keeled; *scape* erect; *flowers* alternate, peduncled, whitish streaked with green, corymbose; *bracteæ* membranaceous, from the base of each peduncle.

1. *Ornithogalum pallidum.* *Pale star-of-Bethlem.*

Raceme very long; *lobes* of the perigonium linear, obtuse; *bracteæ* membranaceous, dilated at the base, very acute; *peduncles* when in flower expanding, when in fruit approaching the scape.

Ornithogalum angustifolium majus, floribus ex albo virescentibus, *Raii Syn.* 372, 1.
Asphodelus bulbosus, *Ger. em.* 97.
Asphodelus bulbosus Galeni, seu Ornithogalum majus, flore subvirescente, *Park. Parad.* 136.
Ornithogalum pyreniacum, *Lin. S. P.* 440.
Ornithogalum flavescens, *Lamarck Fl. Fr.* 3, 277.
Ornithogalum pallidum, *Salisb. Prod.* 239.

Woods and fields; perennial; June and July.

Bulb ovate; *leaves* very long, not in the least notched, smooth; *scape* 3 feet high, upright, many-flowered; *flowers* whitish green, pale yellow within; *peduncles* slender.

2. *Ornithogalum umbellatum.* *Umbelled star-of-Bethlem.*

Raceme inclining to corymbose, few-flowered; *outer peduncles* longer than the central ones; *lobes* of the perigonium elliptical, lanceolate; *bracteæ* long, membranaceous, acute.

Ornithogalum vulgare et verus, majus et minus, *Raii Syn.* 372, 2.
Ornithogalum, *Ger. em.* 167.
Ornithogalum vulgare, *Park. Parad.* 136.
Ornithogalum umbellatum, *Lin. S. P.* 441.
Ornithogalum Theliocharmos, *Renealm*, 88.
Ornithogalum horologicum, *Stokes Bot. Mat. Med.* 1, 242.

Fields, pastures, and woods; perennial; April, May.

Bulbs roundish; *leaves* linear, shrivelled at the tip; *scape* 18 in. high; *flowers* spreading, white.

VII. 118. GAGEA. R. A. Salisbury. *Gage.*

Perigonium 6-sepaled, connivent at bottom, spreading above, persisting; *outer sepales* herbaceous, inner petaloid; *stamens* 6; *filaments* flattish, inserted at the bottom of the sepales, not dilated; *stigma* clavate, blunt; *capsule* ovate, 3-sided; *seeds* many, roundish.—*Root* small, bulbose; *leaves* few, obtuse, mucronate, villous; *flowers* yellow, corymbose; *peduncles* angular.

Gagea fascicularis. *Bundle gage.*

Corymbus many-flowered; *peduncle* smooth, naked below, fascicled; *sepales* elliptical, lanceolate; *scape* angular; *radical leaves* solitary.

Ornithogalum luteum, *Park. Parad.* 140; *Raii Syn.* 372, 1.
Ornithogalum luteum, seu Cepe agraria, *Ger. em.* 165.
Ornithogalum pratense, *Pers. in Uster. N. B. A.* 5, 8.
Gagea fascicularis, *Salisb. Ann. Bot.* 555.
Yellow star-of-Bethlehem.

Moist shady places; perennial; April.

Bulb small; *stem* 6 in. high, erect; *radical leaves* mostly single; *stem leaves* 2, unequal, fringed; fringe white; *corymbus* 5 or 7-flowered.

β. *multiplex.* *Stem-leaves* 3 or 4, unequal.

VIII. 119. MOLY. *Moly.*

Perigonium 6-sepaled, spreading; *stamens* 6, affixed above the base of the sepales, all threadlike, not dilated at bottom, flat; *style* nearly 3-sided; *stigma* acute; *capsule* 3-sided; cells deeply parted; axis threadlike, remaining after the opening of the valves; *seed* 1, rarely 2 or 3, roundish; *corculum* peripherical, more than half the length of the perisperm, curved or spiral; *spermodermis* simple.—*Root* tunicate; *bulb* simple; *leaves* radical, sheathing, flat, linear or lanceolate; *flowers* umbelled, lax, terminal, white or yellow; *spathe* bivalve, lanceolate, membranaceous; *bracteæ* 0; *scape* mostly angular.

Moly latifolium. *Broad-leafed moly.*

Leaves ovate, lanceolate, petiolate; *scape* 3-sided.

Allium sylvestre latifolium, *Raii Syn.* 370, 5.
Allium ursinum, *Ger. em.* 179; *Lin. S. P.* 431.

Woods and damp fields; perennial; May and June.

Bulbs attenuated, oblong; *leaves* acute, ribbed; *scape* upright; *spathe* deflected, shorter than the peduncles.

IX. 120. ALLIUM. *Garlick.*

Perigonium 6-sepaled, spreading; *stamens* 6, affixed at the base of the sepales, those of the outer sepales flat, 3-pointed, middle point antherbearing; the rest simple, threadlike; *stigma* acute; *capsule* 3-sided; cells deeply 2-parted, axis threadshape, remaining after the opening of the valves; *seeds* few, 2 or 3; *corculum* peripherical, more than half the length of the perisperm, curved or spiral; *spermodermis* simple.—*Root* tunicated; *bulb* simple or soboliferous; *leaves* flat or round, radical or cauline; *flowers* umbelled, terminal; *umbells* often bearing bulbs instead of capsules; *spathe* bivalve, dry, membranaceous, many-flowered; *bracteæ* none.

a. *Stem-leaves flat; umbells bearing capsules.*

1. *Allium lætum.* *Pleasant garlick.*

Umbells capsule-bearing, globose; *leaves* thick, rather keeled; *bulb* tunicated; *outer sepales* rough on the outside.

Porrum capitatum, *Ger. em.* 174.
Allium Porrum, *Lin. S. P.* 423.
Allium lætum, *Salisb. Prod.* 234.
Leek.

Cultivated as a pot-herb; biennial.

Bulb oblong, fibrous at bottom, formed of the sheaths of the leaves; *stem* erect, 3 feet high; *flowers* campanulate.—*Juice* diuretic, dissolving calculi; *root* and *seed* vermifuge.

β. *tonsile.* *Leaves* and *stem* short, numerous.

Porrum sectivum, aut tonsile, *Ger. em.* 174.

Produced by cutting down the leaves for use.

2. *Allium porraceum.* *Leek garlick.*

Umbells globose, capsule-bearing; *leaves* thick, linear; *bulbs* soboliferous.

Allium Holmense sphærico capite, Scorodoprasum dictum, *Raii Syn.* 370, 4.
Scorodoprasium primum Clusii, *Ger. em.* 180.
Scorodoprasium alterum Lobelii, *Park.* 872.
Allium Ampeloprasum, *Lin. S. P.* 423.
Allium Porrum β, *Lamark Fl. Fr.* 3, 256.
Porrum Ampeloprasum, *Mill. Dict. n.* 2.
Mountain garlick. Garlick leek.

Sunny hills; perennial; July.

Bulb roundish, composed of 5 or 6 ovate, acute, whitish bulbilles inclosed in the whitish sheaths of the leaves; *stem* 5 feet high, gradually attenuated; *edge* of the leaves rough; *stamens* all tricuspidate, the 3 outer slightly toothed at the sides.

b. *Stem-leaves flat; umbells bearing bulbs.*

3. *Allium sativum.* *Cultivated garlick.*

Umbells bulb-bearing, globose; *leaves* flat, linear, not in the least notched; *bulbs* soboliferous.

Allium, *Ger. em.* 178; *Park. Par.* 511.
Allium sativum, *Lin. S. P.* 425.

Cultivated as a pot-herb.

Peduncle straight.

4. *Allium contortum.* *Twisted garlick.*

Umbells bulb-bearing, globose; *leaves* flat, linear, undulated, subcrenate; *stem* before flowering contorted, afterwards upright.

Ophioscoridon, *Ger. em.* 181.
Scorodoprassum alterum, convoluto capite, *Park.* 813.
Allium Scorodoprasum, *Lin. S. P.* 425.
Allium contortum, *Stokes Bot. Mat. Med.* 2, 229.
Vipers garlick. Rocambole.

Cultivated as a pot-herb of superior flavour to garlick.

Bulbilles in the umbel roundish, slightly compressed on the sides; skin tinged with violet.

5. *Allium arenarium.* *Sand garlick.*

Umbells bulb-bearing, globose; *leaves* flat, linear, rough on the edge; *spathe* short, awnless; *stem* before flowering drooping.

Allium sylvestre amphicarpon, foliis porraceis, floribus et nucleis purpureis, *Raii Syn.* 370, 6.
Porrum vitigineum? *Ger. em.* 176.
Allium arenarium, *Lin. S. P.* 426.
Allium Scorodoprasum, *Fl. Dan.* 1, 290.
Vine leek. French leek.

Woods and mountains in the north; perennial; July.

Bulbs ovate; *stem* 3 feet high; *leaves* linear, with long sheaths.

c. *Stem-leaves round; umbells bearing bulbs.*

6. *Allium vineale.* *Vineyard garlick.*

Umbells bulb-bearing, globose; *leaves* round, fistulose; *stem* round; *bulbs* soboliferous; *seta* of the stamens exserted.

Allium sylvestre, *Raii Syn.* 369, 1; *Park.* 870; *Ger. em.* 179.
Allium vineale, *Lin. S. P.* 428.
Crow garlick.

Dry barren places in chalky soils; perennial; July.

Bulbs 2, small, ovate; *stem* slender; *leaves* smooth; *spathe* falling off.

β. biceps. *Stem* with 2 or 3 heads of bulbs.

Ampeloprason sive Porrum sylvestre, *Ger. em.* 176.
Ampeloprassum, *Park.* 871.

d. *Leaves radical; scape naked; umbells bearing capsules.*

7. *Allium fissile.* *Partible garlick.*

Umbells capsule-bearing, globose; *leaves* awlshape; *scape* round; *bulbs* soboliferous; *stamens* as long as the perigonium.

Ascalonitides, *Ger. em.* 170.
Cepa Ascalonica, *Park. Parad.* 513.
Allium Ascalonicum, *Lin. S. P.* 429.
Scallions. Shallots.

Cultivated as a potherb.

Bulb composed of many little bulbs, not enclosed in a common tunick; *scape* 12 in. high; *spathe* membranaceous; *flowers* small, deep purple; *perigonium* upright, ovate, lanceolate; *anthers* yellow; *stigma* blunt.

IX. 121. CEPA. *Onion.*

Perigonium 6-sepaled, spreading; *stamens* 6, affixed to the bottom of the sepales, simple at bottom, dilated at top; *stigma* acute; *capsule* 3-sided; *cells* deeply 2-parted; *axis* threadshape, remaining after the opening of the valves; *seeds* 2 or 3, roundish; *corculum* peripherical, more than half the length of the perisperm, curved or spiral; *spermodermis* simple.—*Root* tunicated; *bulbs* simple or soboliferous; *leaves* flat, linear or round, radical or cauline; *flower* umbelled, terminal, often bearing bulbilles instead of capsules; *spathe* bivalve, dry, membranaceous, many-flowered, crowded; *bracteæ* 0.

a. *Leaves cylindrical, radical; scape naked.*

1. *Cepa esculenta.* *Esculent onion.*

Umbells capsule-bearing, globose; *scape* fistulous, bellied below; *leaves* round, shorter than the scape.

Cepa alba, *Ger. em.* 169.
Allium Cepa, *Lin. S. P.* 432.
Allium esculentum, *Salisb. Prod.* 255.
Silver-skinned onion. Deptford onion.

Cultivated for kitchen use, in marsh land.

Bulb oblong, ovate, scarcely acrid, sweetish, containing a saccharine principle analogous to manna; *scape* simple.

β. *rubra.* *Bulbs* roundish, purplish, very acrid; *scape* simple.

Common onion.

Cultivated.

γ. *Hispanica.* *Bulbs* oblong, ovate, very sweet, large; *scape* simple.

Spanish onion.

Cultivated from seed obtained from Spain and Portugal; but grows less, and becomes more acrid every year, degenerating into the common onion.

δ. *ramosa.* *Scape* branched.

Tree onion. Bunch onion.

Cultivated, but seldom.

2. *Cepa fistulosa.* *Pipey onion.*

Umbells capsule-bearing, globose; *leaves* round, fistulous, ventricose; *scape* fistulous, as long as the leaves; *outer sepales* shorter than the inner.

Cepa Hispanica oblonga, *Ger. em.* 169.
Cepa longa, *Park. Par.* 511.
Allium fistulosum, *Lin. S. P.* 434.
Long Spanish onions. Welsh onions.

Cultivated as a pot-herb.

3. *Cepa tenuifolia.* *Fine-leafed onion.*

Umbells capsule-bearing, crowded; *leaves* round, awl-shape, threadlike; *scapes* in tufts, as long as the leaves; *sepales* equal.

Schœnoprasum, *Ger. em.* 176.
Allium Schœnoprasum, *Lin. S. P.* 482.
Allium tenuifolium, *Salisb. Prod.* 235.
Cives. Chives.

Fields and pastures; perennial; June; also cultivated for a pot-herb.

Bulbs cylindrical, in tufts; *leaves* attenuated, 6 or 7 in. high, acute, glaucous, sheathing; *scape* slightly curved; *umbells* dense; *spathe* purplish, ovate, persisting; *flowers* crowded, whitish purple; *pistill* very long.

b. *Leaves round, cauline; umbells bulb-bearing.*

4. *Cepa oleracea.* *Pot onion.*

Umbells bulb-bearing, lax; *leaves* half-round, furrowed; *scape* round.

Moly montanum tertium Clusii, *Ger. em.* 188.
Allium oleraceum, *Lin. S. P.* 429.
Allium virens, *Lamarck Enc. Meth.* 1, 67.
Allium virescens, *Lamarck Fl. Fr.* 3, 259.
Allium parviflorum, *Thuill. Paris.*

Edges of fields; perennial; July.

Bulbs ovate; *scape* upright, 2 or 3 feet high, slender; *leaves* slender above, channelled, acute; *spathe* bellied at bottom, attenuated, much longer than the umbells; *flowers* few, campanulate, greenish purple.

c. *Leaves flat, cauline.*

5. *Cepa carinata.* *Keeled onion.*

Umbells bulb-bearing, fewflowered; *leaves* linear, keeled; *spathe* very long, unequal, 2-horned, acute.

Allium montanum bicorne purpureum proliferum, *Raii Syn.* 369, 2.
Moly montanum secundum Clusii, *Ger. em.* 187.
Allium carinatum, *Lin. S. P.* 426.
Mountain garlick.

Rocks and mountains; perennial; July.

Root and *plant* scentless; *stem* upright, 4 feet high; *leaves* slender, flat, obtuse, very longly sheathing; *spathe* leafy; *umbells* fewflowered; *flowers* dull brownish purple.

Fam. XI. 16. ASPARAGI.

Perigonium petaloid, 6-sepaled, regular; *stamens* 6, at the base of the sepales; *anthers* upright, peltate; *ovary* free, 3-celled; *cells* 2-seeded; *style* 1; *stigmata* 3; *berry* 3-celled; *seeds* few, subglobose, affixed to the inner angles of the cells; *spermodermis* simple, black, crustaceous, brittle; *perisperm* cartilaginous, hard; *corculum* curved, transverse, opposite to the umbilicus.—*Plant* herbaceous or shrubby; *leaves* bundled, linear, inclosed at bottom in a sheathing stipule; *flowers* axillary, white.

I. 122. ASPARAGUS. Dioscorides. *Spearage.*

Perigonium 6-sepaled; *sepales* connivent at bottom; *stamens* 6; *filaments* awlshape, bald; *style* short; 3-furrowed.

Asparagus officinalis. *Common spearage.*

Stem herbaceous, round, very branchy; *leaves* bristlelike, bundled; *flowers* often abortive, diclinous; *peduncle* jointed in the middle.

Asparagus maritimus crassiore folio, *Raii Syn.* 267, 2.
Asparagus palustris, *Ger. em.* 1111.
Asparagus officinalis, *Lin. S. P.* 448.

Sea-side; perennial; July.

Stem cylindrical, lying down, very much branched, panicled; *leaves* linear, bristlelike, soft, 3 or 5 together; *stipules* very small; *flowers* yellowish, peduncled, mostly dioicous.

β. *sativus*. *Stem* upright.

Asparagus, *Raii Syn.* 267, 1; *Park.* 454.
Asparagus sativus, *Ger. em.* 1110.
Sparrow-grass. Cultivated spearage.

Cultivated in gardens and fields, for a pot-herb. The young shoots are diuretic, and communicate a violet scent to the urine.

Fam. XII. 17. SMILACEÆ. R. Brown.

Flowers hermaphrodite or unisexual; *perigonium* free, petaloid, 6-sepaled; *stamens* 6, inserted near the base of the sepales; *ovary* 3 or 4-celled; *styles* often 3-cut; *stigmata* 1 to 3; *berry* globose; *seeds* 1 to 6, roundish or angular, affixed one above the other to the inner angles of the cells; *spermodermis* simple, membranaceous, not hard, black, nor brittle; *perisperm* cartilaginous, hard; *corculum* cylindrical, opposite or near to the umbilicus.—*Leaves* curvedly ribbed, opposite, alternate or verticillate; *flowers* solitary, or racemose, whitish; *berries* before they are ripe usually spotted.

A. *Flowers hermaphrodite.*

Perigonium 6-toothed, tubular;
stamens inserted above the base ..... Polygonatum. 125.
Perigonium 6-toothed, campanulate;
stamens inserted at the base ..... Convallaria. 124.
Perigonium 8-parted, spreading ..... Paris. 123.

B. *Flowers dioicous or unisexual.*

Perigonium 6-parted; *androphore* cylindrical. Ruscus. 126.

I. 123. PARIS. Matthiolus. *Herb-Paris.*

Perigonium 8-parted (sometimes 6 to 10), expanding; 4 outer sepales, broad, herbaceous; 4 inner linear, coloured; *stamens* 8 (sometimes 6 or 10); *anthers* adnate to the middle of the filament; filaments inserted at the base of the perigonium; *styles* 4; *stigmata* 4; *ovary* free, rather globose; *berry* 4-celled; *seeds* 6 or 8, ovate, inserted in 2 rows at the inner angles of the cells; *perisperm* fleshy; *corculum* minute, near the hilum.—*Rhizoma* creeping, perennial; *stem* simple; *leaves* 3-ribbed, verticillate, about the middle of the stem; *peduncle* terminal, solitary.

Paris quadrifolia. *Four-leafed herb-Paris.*

Leaves mostly in one whorl, ovate.

Herba Paris, *Raii Syn.* 264, 1; *Ger. em.* 405; *Park.* 390.
Paris quadrifolia, *Lin. S. P.* 527.
One berry. Herb Paris. True love.

Woods and shady places; perennial; May.

Stem 12 in. high; *leaves* 3 to 5, acute, notched, smooth; *peduncle* angular; *flowers* greenish purple.—*Leaves* and *berries* narcotic; *root* emetic in doses of two scruples.

II. 124. CONVALLARIA. Lin. *Lilly-of-the-valley.*

Perigonium campanulate, 6-toothed; *stamens* 6; *anthers* terminal; *filaments* inserted at the base of the perigonium; *style* 1; *stigma* blunt, 3-cornered; *ovary* 3-celled, free; *berry* globose, 3-celled; *seeds* 2, one above the other, affixed to the inner angle of the cells, subglobose; *perisperm* cartilaginous, hard; *corculum* straight, opposite to the hilum. —*Rhizoma* creeping; *leaves* radical, curve-ribbed; *sheaths* scaly, cut; *flowers* racemose, peduncled, whitish, bracteate; *scape* solitary; *bracteæ* lanceolate, solitary, at the base of the peduncle; *berry* spotted before it is ripe.

Convallaria majalis. *May lilly-of-the-valley.*

Scape semicylindrical; *leaves* ovate, lanceolate; *flowers* racemose, spiked; *peduncle* drooping.

Lilium convallium, *Raii Syn.* 264, 1; *Ger. em.* 410.
Lilium convallium flore albo, *Park. Par.* 349.
Convallaria majalis, *Lin. S. P.* 451.
Convallaria fragrans, *Salisb. Prod.* 254.
May lilly. Lilly convally.

Woods; perennial; May.

Flowers white, very fragrant; *berries* red.—*Flowers* narcotic, errhine; extract of the root and flowers bitter and purgative, in doses of two scruples; *leaves* dye a durable green.

III. 125. POLYGONATUM. Dioscor. *Solomon's seal.*

Perigonium cylindrical, tubular, 6-toothed; *stamens* 6, inserted above the base of the perigonium; *anthers* terminal; *style* 1; *stigma* blunt, 3-cornered; *ovary* 3-celled, free; *berry* globular, 3-celled; *seeds* 1 or 2, round; *perisperm* cartilaginous; *corculum* straight, opposite to the hilum.— *Rhizoma* creeping, fleshy: *stem* simple, leafy, sheathed with scales at the base; *leaves* cauline, sessile, alternate or verticillate, longitudinally streaked; ribs prominent, curved; *peduncles* axillary, solitary, 1 or many-flowered; *flowers* drooping, whitish; *bracteæ* 0; *berry* before it is ripe mottled.

1. *Polygonum verticillatum.* *Whorled Solomon's seal.*
Stem upright, angular; *leaves* lanceolate, verticillate.

Polygonatum minus, *Ger. em.* 903.
Convallaria verticillata, *Lin. S. P.* 451.
Small Solomon's seal.

Shady mountains; perennial; June.
Stem 2 feet high, naked at bottom; *leaves* 3 to 7 in a whorl, glaucous; *peduncles* branchy; *berries* red.

2. *Polyg. multiflorum.* *Many-flowered Solomon's seal.*
Stem drooping, round; *leaves* ovate, elliptical, alternate; *peduncles* axillary, 1 or many-flowered; *filaments* hairy; *style* flexuous.

Polygonatum, *Raii Syn.* 263, 1; *Ger. em.* 903.
Polygonatum vulgare, *Park.* 696.
Convallaria multiflora, *Lin. S. P.* 452.
Polygonatum multiflorum, *Desfont. Ann. de Mus.* 9.
Common Solomon's seal.

Woods; perennial; May, June.
Stem 2 feet high, drooping at top; *leaves* facing one way. — *Roots* may be made into bread; young shoots eaten as asparagus.

β. *humile.*

Polygonatum humile Anglicum, *Raii Syn.* 263, 4.

γ. *latifolium.* *Leaves* broad, obovate.

Polygonatum hellebori albi folio, caule purpurascente, *Raii Syn.* 263, 3.
Convallaria latifolia, *Hoffm. Germ.* 3, 162.

3. *Polygonatum vulgare.* *Common Solomon's seal.*
Stem 2-edged, angular, drooping; *leaves* ovate, elliptical, alternate; *peduncles* axillary, 1-flowered; *filaments* smooth; *style* straight.

Polygonatum floribus ex singularibus pediculis, *Raii Syn.* 263.
Polygonatum latifolium secundum Clusii, *Ger. em.* 904, 3.
Polygonatum majus, flore majore, *Park.* 696.
Convallaria Polygonatum, *Lin. S. P.* 451.
Polygonatum vulgare, *Desfont. Ann. de Mus.* 9.
Convallaria rupestris, *Salisb. Prod.* 254.
Odoriferous Solomon's seal.

Woods; perennial; May, June.
Stem 18 in. high, drooping; *flowers* fragrant; *leaves* facing one way.—*Roots* may be made into bread.

β. *biflorum.* *Peduncles* 2-flowered.

IV. 126. RUSCUS. Castor. *Butchers-broom.*

Perigonium 6-parted, expanding; *androphore* cylindrical, tubular; female naked, male with 6 sessile anthers; *style* 1; *stigma* 1, obtuse; *ovary* free, 3-celled; *berry* globose; *seeds* 1 or 2 in each cell, ovate; *corculum* rather straight, not half as long as the perisperm, opposite the hilum.—*Root* branchy, perennial; *herb* very stiff, evergreen, very much branched; *leaves* (leaflike peduncles?) ribbed, alternate, sessile, pungent, flower-bearing; *flowers* sessile, white, dioicous or unisexual.

Ruscus aculeatus. *Prickly butchers-broom.*

Stem stiff; *leaves* mucronate, pungent; *flowers* on the upper surface of the leaves, naked.

Ruscus, *Raii Syn.* 262, 1; *Park.* 253.
Ruscus sive Bruscus, *Ger. em.* 907.
Ruscus aculeatus, *Lin. S. P.* 1474.
Knee holme. Pettigree. Kneehulver. Knee holly.

Woods and heaths; perennial; March and April.

Herb biennial, upright, smooth; *leaves* sessile, not notched, dark green; *flowers* white; *androphore* violet, yellow at top. —*Root* aperitive.

β. *laxus. Leaves* elliptical, narrow at both ends; *branches* loose.

Ruscus laxus, *Smith T. L. S.* 3, 334.

Fam. XIII. 18. TAMACEÆ.

Flowers dioicous; *perigonium* adherent, petaloid, 6-sepaled, bellshape; *sepales* contracted at the orifice; *stamens* 6, at the base of the sepales; *ovary* 3-celled; *ovules* 2 in each cell; *style* 1; *stigmata* 3, acute, 2-cut; *berry* 3-celled; *seeds* few, ovate; *spermodermis* membranaceous.

I. 127. TAMUS. Gesner. *Black-briony.*

Perigonium bellshaped, spreading in the male flowers, contracted in the female, above the ovary; *style* 1; *stigmata* 3; *berry* 3-celled.—*Root* fleshy, tuberous, perennial; *stem* annual, climbing, twisting to the left; *leaves* alternate, petiolate, ribbed; *stipulæ* 2, small, at the base of the peduncle, reflexed; *flowers* racemose, axillary.

Tamus communis. *Common black-briony.*
Leaves cordate, acute, undivided, not notched.

Tamus racemosa, flore minore luteo pallescente, *Raii Syn.* 262, 1.
Bryonia nigra, *Ger. em.* 871.
Bryonia sylvestris nigra, *Park.* 178.
Tamus communis, *Lin. S. P.* 1458.
Wild vine. Our lady's seal.

Woods and hedges; perennial; June and July.

Root black, very large; *stem* branchy, round, 12 feet long, smooth; *leaves* smooth, deep green, varying greatly in shape from reniform to sagittate; *flowers* greenish; *berries* red.—*Root* acrid, stimulant, discutient used externally.

Fam. XIV. 19. AMARYLLIDEÆ. Brown.

Perigonium adherent, 6-cut, regular, imbricate before opening; 3 outer sepales longer than the inner; *stamens* 6, inserted in the base of the sepales or in the tube; *filaments* sometimes connate at the base; *anthers* adverse; *ovary* adherent, 3-celled; *cells* many-seeded; *style* 1; *stigma* 3-lobed; *capsule* 3-celled; *valves* 3, partition-bearing; *seeds* many, affixed to the inner angles of the cells; *perisperm* fleshy; *corculum* inclosed; *spermodermis* simple, membranaceous, neither crustaceous nor black.

A. *Perigonium topshape; limb* 6-*cut; crown cupshape.*

Crown shorter than the limb;
stamens unequal, 3 shorter..... Narcissus. 128.
Crown as long as the limb;
stamens equal in length..... Ajax. 129.

B. *Perigonium very short tubed; limb* 6-*parted; crown* 0.

Lobes of the perigonium equal..... Galanthus. 131.
Lobes of the perigonium unequal.... Leucojum. 130.

I. 128. NARCISSUS. *Narcissus.*

Perigonium funnelshape; *limb* spreading, longer than the crown, 6-cut; *crown* at the mouth of the tube cupshape; thick; *tube* cylindrical; *stamens* 6; 3 *filaments* shorter than the rest, adhering to the tube; *anthers* short, thick, boatshape, upright, nestling in the mouth of the tube; *stigma* small.—*Herb* bulbose; *bulb* tunicated; *leaves* concave, semicylindrical, upright; *scape* 2-edged, compressed; *spathe* 1 or 2-flowered; *tube* of the flower white, thick; *crown* yellow, edge red.

1. *Narcissus majalis.* *May narcissus.*

Leaves erect, obtusely keeled, rather curved, glaucous; *lobes* of the perigonium imbricate, laterally deflexed, crowned; *crown* yellow, minutely plaited; edge rather scariose, white, slender; outer edge scarlet, crenulate; *stigma* as long as the shorter stamens.

Narcissus medio purpureus, *Ger. em.* 128.
Narcissus medio purpureus maximus, *Park. Par.* 76.
Narcissus poeticus, *Lin. S. P.* 414?
Narcissus majalis, *Curtis Bot. Mag.* 193.
Narcissus patellaris, *Salisb. Prod.* 225.
Poets' narcissus. Purple circled daffodil.

Sandy heaths and fields; perennial; May.

Leaves about one-third in. broad, edge reflexed; *scape* erect; *spathe* 1-flowered, often 2-lobed; *flower* upright, very fragrant, snow white; *crown* scarlet edged.

2. *Narcissus biflorus.* *Two-flowered narcissus.*

Leaves acutely keeled; *crown* entirely yellow; *spathe* 2 or 3-flowered; *scape* kneed before flowering.

Narcissus medio luteus vulgaris, *Raii Syn.* 371, 2; *Park.* 74.
Narcissus medio luteus, *Ger. em.* 124, 7.
Narcissus poeticus, *Huds. Fl. Angl.* 141.
Narcissus biflorus, *Curtis Bot. Mag.* 197.
Narcissus cothurnalis, *Salisb. Prod.* 225.
Pale narcissus. Primrose peerless. Common white daffodil.

Sandy fields; perennial; April and May.

Edge of the leaves turned in; *scape* upright; *spathe* not notched; *flowers* drooping, sweet-smelling, yellowish white.

II. 129. AJAX. R. A. Salisbury. *Daffodil.*

Perigonium funnelshape, limb spreading, 6-parted, as long as the crown; crown large, cupshape; tube topshape, shorter than the lobes; *stamens* 6, free, equal, threadshape, inserted at the base of the tube, or slightly adnate to the sides, often 3 times as short as the crown; *anthers* linear, long.—*Herb* bulbose; *bulb* tunicated, rounded below, concave above; *leaves* 2-rowed, strapshape, thick, ribbed, streaked, flat, channelled, more or less glaucous, mostly upright before flowering; *scape* upright, 2-edged; *spathe* membranaceous, 1 or 2-flowered; *flower* yellow.

1. *Ajax fenestralis.* *Window daffodil.*

Scape 2-edged, roundish, straight, striated; *outer lobes* elliptical, lanceolate, scarcely longer than the tube; *crown* straight, crenate, serrate, the length of the lobes.

Narcissus sylvestris pallidus, calyce luteo, *Raii Syn.* 371, 1.
Pseudo-narcissus Anglicus, *Ger. em.* 133, 2.
Pseudo-narcissus Anglicus vulgaris, *Park. Par.* 100.
Common yellow daffodil. Daffodowndilly.

Woods; perennial; March.

Flower drooping, scentless; *lobes* of the perigonium pale yellow; *crown* bellshape, golden yellow.

β. *Scoticus.* *Scape* 2-edged, compressed, tortuous, deeply striated; *lobes* of the perigonium elliptical, lanceolate, much longer than the tube; *edge* of the crown expanded, cut, serrate, rather rugose.

Ajax fenestralis Scoticus, *Haworth Syn. Suc. app.*

2. *Ajax spurius.* *Bastard daffodil.*

Scape 2-edged, smooth, compressed; *sepales* rather erect, lanceolate; *crown* much longer than the tube; edge 6-cut, toothed, spreading.

Ajax spurius, *Haworth Syn. Succ. app.* 329.

Woods and pastures; perennial; April.

Leaves striated, smooth; *sepales* and *crown* yellow; *tip* of the anther black.

III. 130. LEUCOJUM. Dioscorides. *Snow-flake.*

Perigonium 6-parted, tube short, limb bellshape; *lobes* equal, thickened at the tip; *stamens* 6, inserted on a gland covering the ovary; *anther* obtuse, opening by two pores at the tip; *style* clavate; *stigma* simple, acute; *capsule* 3-celled; *seeds* many, roundish. — *Herb* bulbose; *bulbs* round, tunicated; *leaves* radical, many, keeled; *scape* 2-edged, upright; *spathe* 1-leafed, 1 or many-flowered, compressed; *peduncle* 1-flowered; *flowers* white, drooping, green at the tip.

Leucojum æstivum. *Summer snowflake.*

Spathe many-flowered.

Leucojum bulbosum majus polyanthemum, *Ger. em.* 148.
Leucojum æstivum, *Lin. S. P.* 414.

Damp fields; perennial; May.

Scape 18 in. long, upright; *leaves* blunt, smooth; *spathe* upright; *flowers* 5 or 6.

IV. 131. GALANTHUS. Linnæus. *Snowdrop.*

Perigonium 6-parted; tube short, limb bellshape, lobes unequal; 3 inner half the length of the 3 outer, heartshape, thickened at the tip; *stamens* 6, inserted on a gland covering the ovary; *anthers* awlshape, opening at the top by 2 pores; *style* threadshape; *stigma* acute; *capsule* 3-celled; *seeds* many, globose.—*Herb* bulbose; *bulb* ovate, tunicated; *leaves* radical, 2, glaucous, keeled; *sheaths* membranaceous, not nicked; *scape* round, not inclosed in the sheath; *spathe* cylindrical; *flower* 1, peduncled, drooping, white, tipped with green.

Galanthus nivalis. *White snowdrop.*

Leucojum bulbosum præcox minus, *Ger. em.* 147.
Galanthus nivalis, *Lin. S. P.* 413.
Early bulbous violet. Fair maids of February.

Fields and orchards; perennial; February and March.
Stem 12 in. high. One of the first flowers that appear, as a harbinger of summer.

Fam. XV. 20. IRIDEÆ. Ventenat. *Irides*, Jussieu. *Ensatæ*, Linnæus. *Liliacearum genera quædam*, Adanson.

Perigonium adherent, petaloid, tubular at bottom, limb 6-cut or parted, often irregular; *stamens* 3, inserted at the base of the exterior lobes; *anther* linear, opening outwards; *ovary* 1; *style* 1; *apex* 3-cut, lobed, often petaloid; *stigmata* 3; *capsule* 3-celled, 3-valved; *valves* partition-bearing; *placenta* linear, on the inner edge of the partitions; *seeds* many, roundish; *perisperm* horny or thick and fleshy; *corculum* inclosed, straight near the hilum.—*Herb* smooth; *root* tuberous or fibrous; *leaves* averse, equitant, 2-rowed or linear; *flower* radical, terminal, spiked, corymbose, or on a crowded panicle.

Tube of the perigonium long; *limb* regular; *lobes* of the style wedgeshape; *spathe* 1 or 2, outer tubular ..... Crocus. 132.

Tube of the perigonium short; *limb* regular *lobes* of the style linear; *stigmata* 2-parted; *spathe* 2-valved ..... Trichomema. 133.

Tube of the perigonium short; *limb* alternately deflexed; *lobes* of the style petaloid; *stigmata* linear ..... Iris. 134.

I. 132. CROCUS. Theophrastus. *Saffron.*

Perigonium funnelshape; *tube* long; *limb* 6-parted, regular; *stamens* 3; *filaments* awlshape, inserted in the base of the lobes of the perigonium; *anthers* linear; *pollen* globular; *ovary* 3-sided, adherent; *style* long, filiform; apex truncated, 3-lobed; *lobes* wedgeshape, erose or fringed at the tip; *stigma* terminal; *capsule* 3-sided; *seeds* many, roundish; *shell* succulent; *perisperm* horny; *corculum* central, straight, radicle descending.—*Herb* stemless, perennial; *combus* double, one above the other; *tunics* entire or reticulately fibrous; *leaves* slender, linear, radical; *midrib* broad, whitish; *spathe* 1 or 2 leaved, membranaceous, 1 to 3 flowered; *capsules* when ripe elevated.

a. *Lobes of the style truncated, erose or toothed; spathe 1-leafed; tube of the perigonium closed above with hairs; flowers vernal, with the leaves, no part yellow.*

1. *Crocus vernus.* *Spring saffron.*

Tunics of the combus ribbed, fibrous; *midrib* of the leaves white; *style* longer than the stamens; *lobes* of the perigonium lanceolate, attenuated, imbricated.

Crocus vernus flore purpureo, *Ger. em.* 154, 5.
Crocus sativus vernus, *Lin. S. P.* 250.
Crocus vernalis cœrulea, *Deering Notts.* 60.
Crocus officinalis β, *Huds. Fl. Angl.* 13.
Crocus vernus, *Wulfen.*
Ixia vernalis, *Salisb. Prod.*
Crocus vernus β, *Gawler Bot. Mag.* 2860.
Purple spring saffron. Purple crocus.

Fields; perennial; March and April.
Flowers blue, white or violet.

b. *Lobes of the style truncated, erose or toothed; spathe 2-leafed; tube of the perigonium bald; flowers autumnal, before the leaves, yellowish.*

2. *Crocus sativus.* *Cultivated saffron.*

Lobes of the style reflexed, longer than the lobes of the perigonium; *tube* longer than the limb.

Crocus, *Raii Syn.* 374, 1; *Ger. em.* 151.
Crocus verus sativus autumnalis, *Park. Par.* 167.
Crocus sativus officinalis, *Lin. S. P.* 50.
Crocus setifolius, *Stokes Bot. Mat. Med.* 104.
Crocus officinalis, *Engl. Bot.* 343.
Ixia autumnalis, *Salisb. Prod.* 33.
Saffron. True saffron.

Fields and pastures; perennial; September to November: also cultivated.

Flowers pale blue, streaked with violet; tube yellow; *spathe* 2-valved; *leaves* fringed, come out after the flower, and remain all the winter.—*Stigmata* cordial.

c. *Lobes of the style many cut; spathe* 1-*leafed; flowers autumnal, appearing before the leaves.*

3. *Crocus nudiflorus.* *Naked saffron.*

Tunics of the combus membranaceous, filamentous.

Crocus montanus autumnalis, *Ger. em.* 154, 6.
Colchicum commune, *Deering Nott.* 57.
Crocus nudiflorus, *Engl. Bot.* 491.
Crocus multifidus, *Ramond Bull. de S. P.* 41.
Crocus medius β, *Allioni Add. Fl. Ped.* 39.

Meadows; perennial; October.

Lobes of the styles 7 to 12-cut, cuts linear; *leaves* appear in December, upright; *edge* scarcely revolute; not gangrened at the tips; *flowers* naked, purple violet; fruits in May.

II. 133. TRICHOMEMA. Kerr. *Wild-saffron.*

Tube of the perigonium very short; *limb* large, 6-cut, regular; lobes equal; *filaments* upright, short, pubescent, inserted at the mouth of the tube; *anthers* connivent; *stigmata* 3-cut, lobes 2-parted, linear, spreading; *capsule* 3-sided; *seeds* many, rounded.—*Combus* ovate, conical; base capillary (with a fusiform root); *tunicks* crustaceous, smooth; toothed at the tip; *sheath* 2-valved, lanceolate, membranaceous; *leaves* mostly 4, slender, linear, ribbed, thickest in the middle; *scape* upright, 1 or 2-flowered; *spathe* 2-valve, lanceolate, acute, glumaceous, edge membranaceous; *flowers* terminal, sessile, blue.

Trichomema parviflorum. *Small wild-saffron.*

Leaves linear, compressed; *lobes* of the perigonium lanceolate, retuse; inner one scarcely broader than the outer; *stigma* revolute.

Crocus vernus minor, *Ger. em.* 152.
Crocus Bulbocodium, *Lin. S. P.* 36?
Romulea, *Miller Figures*, 24.
Ixia Bulbocodium, *Engl. Bot.* 2549.
Ixia Bulbocodium β, *De Cand. Syn. Fl. Gall.* 2000.
Ixia parviflora, *Salisb. Prod.* 34.

Hills in Guernsey; perennial; May.

Scape 3 in. high; *leaves* very narrow, flexuous, furrowed; *perigonium* blue, tube very short; *spathe* half as long as the perigonium; *scape* shorter than the leaves.

III. 134. IRIS. Theophrastus. *Fleur-de-luce.*

Tube of the perigonium short; *limb* 6-parted; lobes unequal, 3 outer lobes spreading or reflexed; 3 inner smaller, upright or inflexed; *stamens* 3, distinct; *style* 1, short, 3-lobed; *lobes* petaloid, often nicked, furrowed above; *stigmata* 3, on the duplicatures on the lower surface of the petaloid lobes; *capsule* 3-sided; *seeds* many, globose; spermodermis double; shell spongy, loose; corculum straight, half the length of the perisperm.—*Leaves* ensiform, 2-rowed; *stem* compressed, leafy; *spathe* 2 or 3 valved, 2 or 3 flowered; valves keeled, herbaceous, edge membranaceous; *flowers* fascicled, yellow or blue, striated or veined.

a. *Leaves flat, equitant, ensiform, 2-rowed; rhizoma creeping, depressed, annulate; lobes of the perigonium beardless.* Iris.

1. *Iris palustris.* *Marsh fleur-de-luce.*

Stem compressed, ovate, many-flowered; *lobes* of the perigonium beardless; inner erect, smaller than the stigmata; *leaves* ensiform.

Iris palustris lutea, *Raii Syn.* 374, 1; *Ger. em.* 50, 2.
Iris Pseudacorus, *Lin. S. P.* 56.
Iris lutea, *Lamarck Fl. Fr.* 3, 496.
Iris palustris, *Salisb. Prod.* 44.
Yellow flag. Water flag. Bastard fleur-de-luce. Seggs, in the North.

Ponds and watery-places; perennial; July.

Stem 4 feet high, 3 to 6 flowered, higher than the leaves; *leaves* 1 in. broad; *flowers* yellow, spotted with deeper yellow, veined with black; *stigmata* yellow.—*Roots* acrid when fresh, warm when dry, may be substituted for galangals; juice of the root purgative in doses of 80 drops every hour, but is very violent in its operation; *seeds* roasted resemble coffee, having more nearly the same aroma than any other substitute for that drug.

β. *pallida.* *Flowers* pale yellow or white.

Iris palustris pallida, *Raii Syn.* 375, 2.

2. *Iris fœtida.* *Stinking fleur-de-luce.*

Stem 1-edged, few-flowered; *lobes* of the perigonium beardless; inner larger than the stigmata, spreading very much; *leaves* swordshape; *ovary* 3-sided; angles furrowed, 2-cut.

Iris sylvestris, quam Xyrim vocant, *Raii Syn.* 375, 3.
Xiris, *Ger. em.* 60.
Xiris seu Spatula fœtida, *Park.* 256.
Iris fœtidissima, *Lin. S. P.* 57.
Iris fœtida, *Salisb. Prodr.* 44.
Stinking gladdon. Spurge wort.

Woods and hedges; perennial; June and July.

Stem 2 feet high, half round, 2 or 4-flowered, scarcely higher than the leaves; *leaves* dark green; *perigonium* dull grey blue, streaked or veined with black; outer lobes roughly folded beneath.—Juice of the root errhine; *root* in infusion or decoction purgative, leaving a costiveness like rhubarb; *seeds* diuretic.

b. *Bulb tunicated; leaves channelled; lobes of the perigonium beardless.* Xyphium.

3. *Iris variabilis.* *Changeable fleur-de-luce.*

Scape 2-flowered; *lobes* of the perigonium as narrow as the lobes of the style; *ovary* round, 3-sided.

Iris bulbosa Anglica, *Ger. em.* 99, 2.
Iris Xiphium, *Lin. S. P.* 58.
Xyphium vulgare, *Miller Dict.*
Iris variabilis, *Jacq. Coll.* 2, 139.
Iris coronaria, *Salisb. Prod.* 45.
Onion fleur-de-luce.

River sides; perennial; July.

Leaves channelled, awlshape, a little longer than the stem; *perigonium* purplish blue; *stem* sometimes one-flowered.

Fam. XVI. 21. ORCHIDEÆ. Jussieu.

Perigonium petaloid, adherent to the ovary, 6-sepaled; *sepales* irregular, in two series, often variously soldered; outer series of 1 odd sepale and 2 alike; inner of 2 sepales alike and one odd one called the lip; *anthers* 1 or 2, sessile, on the gymnostemium; *pollen* agglutinated into a determinate figure; *gymnostemium* columnar; *gynizus* variously placed; *pericarpium* 1-celled, 3 valved, opening laterally by the ribs; *placentaria* 3, on the middle of the valves; *seeds* numerous, very minute; *spermodermis* membranaceous; *perisperm* fleshy; *corculum* at the base.—*Plants* herbaceous; *root* tuberous, gingiberaceous or fascicled; *scape* simple; *leaves* sessile, ribbed lengthways, sheathing at bottom; *flowers* spiked; *bractea* 1, at the bottom of each flower.

A. *Pollen longitudinally divided; caudicle with a retinacle.*

a. *Retinacle bursiculate, single and common to both the pollen masses.*

Perigonium galeate; *lip* long, linear; *base* with a short scrotiform spur .... LOROGLOSSUM. 135.
Perigonium galeate; *lip* long, linear; *base* flat, or very slightly gibbous ..... ACERAS. 136.
Perigonium galeate; *lip* spurred; claw bearing 2 scales longitudinally ... ANACAMPTIS. 137.

b. *Retinacles bursiculate,* 2.

Per. arched or galeate; *lip* spurred; *bursicles* undivided ..... ORCHIS. 138.
Perig. spread; *lip* spurless, convex; *rostellum* split into 2 bursicules ..... OPHRYS. 139.

c. *Retinacles naked.*

Perigon. arched; *lip* spurred, 3-cut; *spur* bristlelike; *rostellum* split ..... GYMNADENIA. 140.
Perigon. galeate; *lip* spurred, 3-cut; *spur* short; *rostellum* split ..... ENTATICUS. 141.
Per. arched or galeate; *lip* spurred, undivided; *cells* of the anther distant; *rostellum* 0 ..... PLATANTHERA. 142.
Per. nearly bellshape; *inner sepales* longest; *lip* many-cut, purselike at the bottom .. HERMINIUM. 143.

B. *Pollen longitudinally divided; retinacle* 0.

Per. connivent below; *lip* enclosed, spurless, undivided; *pollen* unarmed .... GOODYERA. 144.

C. *Pollen granular; anther* 1.

Per. oblong, connivent; *lip* obovate; *gynizus* rather elliptic; *spike* spiral .... SPIRANTHES. 145.
Per. globose, connivent; *lip* obcordate; *gynizus* rather elliptic; *stem* leafless ..... NEOTTIA. 146.
Per. globose, connivent; *lip* linear, 2-parted; *gynizus* rather elliptic; *stem* 2-leaved ..... LISTERA. 147.
Per. erect, connivent; *lip* embracing, entire; *ovary* sessile; *rostellum* 0 ..... CEPHALANTHERA. 148.
Per. spread; *lip* spread, interrupted; *ovary* pedicelled; *rostellum* on the apex EPIPACTIS. 149.

D. *Pollen granular; anthers* 2.

Per. cross-like, spread;
lip inflated, slippershape ..... CYPRIPEDIUM. 150.

E. *Pollen solid, formed of two small masses.*

a. *Cells of the anther simple.*

Per. much spread; *lip* subovate behind;
gynostemium oblong; upper part winged. PSEUDORCHIS. 151.
Per. spread vertically; *lip* behind, heartshape;
gynostemium very short, not winged..... MALAXIS. 152.

b. *Cells of the anther* 2-*parted.*

Per. arched; *perule* adnate;
lip obovate; *gynost.* long, not winged CORALLORHIZA. 153.

A. *Pollen* divided; *caudicle* with a retinacle; *retinacle* bursiculate; *perigonium* galeate; *gynizus* at the base of the gynostemium, close to the lip; *clinandrum* 0; *staminodia* wrinkled; *cells* of the anthers divided by a septulum.—*Root* 2-tubercled.

I. 135. LOROGLOSSUM. Richard. *Lizard-flower.*

Perigonium galeate; *inner sepales* very narrow; *lip* gibbous at bottom, very long, three parted, middle lobe 2-cut; *gynostemium* very short; retinacle 1, bursiculate.

Loroglossum hircinum. *Goat lizard-flower.*
Lip pubescent, 3 times as long as the ovary.

Orchis barbata fœtida, *Raii Syn.* 376, 1.
Tragorchis maximus, and T. mas, *Ger. em.* 210, 1 & 2.
Tragorchis maximus, and T. vulgaris, *Park.* 1348.
Satyrium hircinum, *Lin. S. P.* 1337.
Orchis hircina, *Swart in Act. Holm.* 1800, 127.
Great goat-stones. Male goat-stones.

Chalky soils; perennial; July and August.
Stem 2 or 3 feet high, fistulous; *spike* many-flowered; *bractea* linear, twice as long as the ovary; flowers dull purple, stinking.

β. *minor. Plant* smaller; *flowers* white.

Orchis barbata fœtida minor, flore albo, *Raii Syn.* 376, 2.
Orchis coryophora, *Huds. Fl. Angl.* 383?

II. 136. ACERAS. R. Brown. *Aceras.*

Perigonium galeate; *inner sepales* narrow; *lip* flat, pendulous, long, linear, 3-parted, middle lobe 2-cut; *gymnostemium* very short; *retinacle* 1, bursiculate.

Aceras anthropophora. *Man aceras.*

Lip longer than the ovary.

Orchis anthropophora oreades, *Raii Syn.* 379, 12.
Orchis anthropophora oreades fœmina, *Park.* 1348.
Ophrys anthropophora, *Lin. S. P.* 1343.
Orchis anthropophora, *Allioni Pedem.* 1835.
Aceras anthropophora, *Brown in Ait. H. Kew.* 319.
Loroglossum anthropophorum, *Richard Mem. Mus.* 4, 54.
Green man-orchis.

Chalky pastures; perennial; June.

Scape 18 in. high; *spike* many-flowered; *bractea* membranaceous; *flowers* greenish purple.

III. 137. ANACAMPTIS. Richard. *Anacamptis.*

Perigonium arched, or galeate; *lip* spurred, spread, claw with 2 scales on the middle; *gymnostemium* very short; *retinacle* 1, bursiculate, the fore part grown together by the sides into a cylinder.

Anacamptis pyramidalis. *Pyramidal anacamptis.*

Spur threadshape, as long as the ovary; *spike* dense, oblong.

Orchis purpurea spica congesta pyramidalis, *Raii Syn.* 377, 6.
Orchis pyramidalis, *Lin. S. P.* 1332.
Anacamptis pyramidalis, *Richard Mem. Mus.* 4, 55.
Purple late-flowered orchis.

Dry chalky pastures; perennial; June and July.

Scape 18 in. high; *leaves* not spotted; *spike* pyramidal, close, many-flowered, afterwards long; *bractea* coloured, as long as the ovary; *flowers* purplish or white.

IV. 138. ORCHIS. Theophrastus. *Orchis.*

Perigonium arched, or galeate; *lip* spurred, spread; *gynostemium* very short; *gynizus* entirely behind the orifice of the spur; *rostellum* prominent below, never before; *bursicle* undivided, 2-celled within; *anther* longer than the gynostemium, upright, roundish-ovoid or inverse-ovate, not pointed at the tip; *retinacles* short-elliptic.

1. *Orchis fusca.* *Brown orchis.*

Lip rough, 3-parted; lobes unequal, ragged; lateral ones linear; middle lobe broad, 2-cut with an intermediate point; *sepales* blunt, connivent; *spur* straight, one-third the length of the ovary; *bractea* very short.

Orchis strateumatica, *Ger. em.* 215, 12; *Park.* 1344, 6.
Orchis magna latis foliis, galea fusca vel nigricante, *Dillen in Raii Syn.* 378, 11.
Orchis militaris β and δ, *Lin. S. P.* 1334.
Orchis pu purea, *Huds. ed.* 1, 334.
Orchis fusca, *Murray Syst. Veg. ed.* 14, 809.
Orchis moravica, *Jacq. Ic. rur.* 9, 182.

Chalky soils; perennial; May and June.

Stem 18 in. high; *flowers* large, greenish brown, brownish purple or pale ash-grey; *sepales* broad.

2. *Orchis militaris.* *Soldier orchis.*

Lip rough, 3-parted; lobes equal, incurved, broad; middle lobe 2-cut with an intermediate point; *sepales* pointed, connivent; *spur* straight, half as long as the ovary; *bractea* very short.

Orchis strateumatica minor, *Ger. em.* 216, 13; *Park.* 1344, 8.
Orchis militaris, *Lin. S. P.* 1333.
White dogs-stones. *Man-orchis.*

Chalky places; perennial; May.

Scape 12 in. high; *leaves* broad-lanceolate, spotless; *spike* many-flowered, dense; *flowers* purplish.

3. *Orchis tephrosanthos.* *Grey-spiked orchis.*

Lip roughish; lobes 3, equal, linear; middle lobe 2-cut, with an intermediate point; *sepales* pointed, connivent; *spur* rather bent, half as long as the ovary; *bractea* very short.

Cynosorchis major altera, *Ger. em.* 205, 2.
Cynosorchis latifolia minor, *Park.* 1344, 4.
Orchis galeâ et alis fere cinereis, *Raii Syn.* 378, 10.
Orchis militaris ε, *Lin. S. P.* 1334.
Orchis militaris, *Engl. Bot.* 1873.
Orchis tephrosanthos, *Villars Delph.* 2, 32.
Orchis Simia, *De Cand. Fl. Fr. ed.* 3, 249.

Chalky places; perennial; May.

Spike abruptly terminated; 2 *outer sepales* sometimes lip-shaped and spurred.

4. *Orchis latifolia.* *Broadleaf orchis.*

Lip smooth, 3-lobed, turned over at the sides; *upper sepales* connivent; *spur* conical, shorter than the ovary; *bractea* longer than the flower.

Orchis palmata pratensis latifolia longis calcaribus, *Raii Syn.* 389, 19.
Orchis palmata major mas, sive Palma Christi mas, *Park.* 1356.
Orchis latifolia, *Lin. S. P.* 1334.
Orchis comosa, *Scop. Carn.* 1120.
Male Satyrion royal. Male handed orchis.

Marshes and meadows; perennial; May and June.

Root palmate; *scape* fistulous, 18 in. high; *leaves* 4 or 6, broad, lanceolate; *spike* 30 or 40-flowered; *bractea* leaflike, strapshape, slightly coloured; *flowers* rosy, or blood colour; *lip* dilated, middle lobe short with dotted lines.

β. *obtusa.* *Middle lobe* of the lip blunt, as long and only half as broad as the side ones.

Palma Christi mas, *Ger. em.* 221, 1.
Orchis latifolia, *Curtis Fl. Lond.* 165.

γ. *palustris.* *Middle lobe* of the lip ovate, pointed, twice as long as the side ones.

Serapias palustris latifolia, *Ger. em.* 223, 3.
Serapias dracontias palustris, *Ger. em.* 226, 1.
Marsh satyrion. Marsh dragon satyrion.

δ. *rubra.* *Leaves* and *flowers* red.

Orchis palmata palustris, tota rubra, *Dillen in Raii Syn.* 382, 25.

5. *Orchis maculata.* *Spotted orchis.*

Lip nearly flat, 3-lobed; side lobes toothed, middle lobe pointed; *upper sepales* approximating; lateral spread; *spur* cylindrical, shorter than the ovary; *bractea* as long as the ovary.

Orchis q. Palmata speciosiore thyrso, folio maculato, *Raii Syn.* 381, 20.
Palma Christi fœmina, *Ger. em.* 221, 2.
Orchis palmata fœmina, seu Palma Christi fœmina foliis maculatis, *Park.* 1357.
Orchis maculata, *Lin. S. P.* 1335.
Female satyrion royal. Female handed-orchis.

Woods and rich meadows; perennial; June and July.

Root palmate, divaricated; *scape* slender, solid, 2 feet high; *leaves* lanceolate, generally spotted with black; *spike* long, or a short pyramid; *flowers* purple; *lip* marked with lines and spots.

6. *Orchis ustulata.* *Coffee-colour orchis.*

Lip 3-lobed, lobes linear, rough with dots; middle lobe 2-cut; *sepales* upright, pointed; *spur* hooked, one-third the length of the ovary and bractea.

Orchis Pannonica quarta Clusii Historiæ, *Raii Syn.* 377, 4.
Cynosorchis minor Pannonica, *Ger. em.* 207, 5.
Cynosorchis militaris Pannonica, *Park.* 1345.
Orchis ustulata, *Lin. S. P.* 1333.
Lesser Austrian dogs-stones. Little purple flowered orchis. Dwarf orchis

Chalky pastures; perennial; June.

Scape 8 in. high, angular; *leaves* 4 or 6, lanceolate, not spotted; *spike* short, close, many-flowered; *bractea* ovate, purple; *flowers* small, brown, greenish white on the inside; *spur* blunt, compressed; *lip* white, with elevated spots.

7. *Orchis mascula.* *Male orchis.*

Lip 3-lobed, crenulate, obtuse; middle lobe 2-cut; *sepales* pointed, 2 inner upright, spread; outer reflexed, 3-ribbed; *spur* conical, ascending, as long as the germen.

Orchis morio mas, foliis maculatis, *Raii Syn.* 376, 3; *Park.* 1346.
Cynosorchis morio mas, *Ger. em.* 208.
Orchis mascula, *Lin. S. P.* 1333.
Male fool-stones.

Woods and pastures; perennial; April and May.

Root 2-tubercled; *scape* 2 feet high; *leaves* broad, spotted with dark purple; *bracteæ* lanceolate, coloured, scarcely as long as the ovary; *flower* uniformly coloured; *spur* blunt, horizontal; *lip* hanging down, base white with a few purple spots.—*Root*, as being the most abundant species, is made into *salep*, by being taken up when the stalks begin to fall, the new tubercles separated, washed, and the outer thin skin taken off: the prepared tubercles are then spread upon a tin plate, and stoved for 8 or 10 minutes in a heat sufficient to bake bread; by which they acquire a semitransparency like horn, without much diminution in size. Salep is one of the most nutritive species of food known at present, and extremely useful in travelling and in sea voyages. It is probable the other species of this genus might be prepared in the same manner.

8. *Orchis morio.* *Fool orchis.*

Lip 3-lobed; lobes crenate, middle lobe nicked; *sepales* ascending, obtuse; *spur* conical, ascending, shorter than the ovary.

Orchis morio fœmina, *Raii Syn.* 377, 4; *Park.* 1347.
Cynosorchis morio fœmina, *Ger. em.* 208.
Orchis morio, *Lin. S. P.* 1333.
Female fool-stones.

Fields and meadows; perennial; May and June.

Root 2-tubercled; *scape* 12 in. high; *leaves* lanceolate; *spike* loose, 12-flowered; *bracteæ* lanceolate, membranaceous, coloured; *flowers* purple; *sepales* blunt; 3 upper with 3 or 5 greenish ribs; *spur* bent, thickened at the tip; *lip* dilated, middle lobe spotted.

V. 139. OPHRYS. Pliny. *Satyrion.*

Ovary not twisted; *perigonium* spread, inner sepales often manifestly smaller; *lip* spurless, wider backwards, convex, mostly silky and variously painted, cartilaginous, stiff; *rostellum* very short, split into 2 roundish bursicles; *retinacle* distinctly bursiculate, short-elliptic.—*Bulbs* roundish; *stem* leafy; *leaves* lanceolate, rather glaucous; *spike* loose; *bracteæ* lanceolate, leaflike; *ovary* sessile.

1. *Ophrys apifera.* *Bee satyrion.*

Lip 3-cut, middle lobe longest, rather 3-cut; terminal segment awlshape, recurved; *anther* pointed, hooked.

Orchis fuciflora, galea et alis purpurascentibus, *Raii Syn.* 379, 15.
Testiculus vulpinus secundus sphegodes, *Ger. em.* 212, 3.
Orchis sphegodes seu fucum referens, *Park.* 1350.
Orchis apifera, *Huds. Fl. Angl.* 391.
Humble-bee orchis. Bee flower.

Dry pastures on chalky soils; perennial; July.

Stem 12 in. high; *leaves* broad; *bracteæ* longer than the ovary; *spike* few-flowered, loose; 3 *outer sepales* elliptical, obtuse, purple; 2 inner lanceolate, very short, greenish.

2. *Ophrys aranifera.* *Spider satyrion.*

Lip 3-lobed; side lobes short, blunt; middle lobe nicked, turned back; *anther* acute.

Orchis sive Testiculus sphegodes hirsuto flore, *Raii Syn.* 380, 16.
Ophrys aranifera, *Huds. Fl. Angl.* 392.
Ophrys fucifera, *Curtis Fl. Lond.* 6, 67.
Ophrys arachnites β, *De Cand. Syn. Fl. Gall.* 2032.

Chalky places; perennial; April and May.

Stem 12 in. high; *spike* few-flowered; *flowers* green; *lip* brown; *sepales* spread; 3 outer oblong, obtuse; 2 inner lanceolate, short, pointed.

3. *Ophrys muscifera.* *Fly satyrion.*

Lip 3-lobed; middle lobe largest, cut into 2 segments, disk shining; *anther* obtuse.

Orchis myodes, galea et alis herbidis, *Raii Syn.* 379, 13.
Orchis myodes minor, *Park.* 1352.
Orchis myodes, *Ger. em.* 212, 6.
Ophrys muscifera, *Huds. Fl. Angl.* 391.
Ophrys insectifera myodes, *Lin. S. P.* 1343.
Common fly-orchis.

Chalky pastures; perennial; June.

Stem 9 in. high; *spike* loose, few-flowered; *bracteæ* yellowish; 3 *outer sepales* green, 2 inner purple; *lip* oblong, dark red with bluish spots in the centre.

VI. 140. GYMNADENIA. R. Brown. *Gymnadenia.*

Ovary reclined at the tip; *perigonium* arched; *lip* spurred, 3-cut; spur linear; *gynostemium* very short; *rostellum* split; *retinacle* distinct, naked; *gynizus* usually surrounding the opening of the spur, crescent-like, dilated at each end forwards.—*Bulb* palmate; *leaves* radical, slender; *spike* loose; *bracteæ* leaflike, lanceolate; *flowers* sweet-scented.

Gymnadenia conopsea. *Gnat gymnadenia.*

Spur twice as long as the ovary.

Orchis q. Palmata rubella cum longis calcaribus rubellis, *Raii Syn.* 381, 21.
Serapias minor nitente flore, *Ger. em.* 222.
Orchis palmata minor flore rubro, *Park.* 1358.
Orchis conopsea, *Lin. S. P.* 1335.
Gymnadenia conopsea, *R. Brown in Ait. H. Kew.* 5.
Red handed-orchis.

Meadows; perennial; June.

Stem 18 in. high; *leaves* bright green; *flowers* pale purple, smelling like cloves; *lip* bluntly 3-lobed, middle segment not nicked; *side sepales* much spread; *spur* bristle-like.

β. *alba.* *Flowers* white.

VII. 141. ENTATICUS. Apulejus. *Hand-orchis.*

Ovary reclined at the tip; *perigonium* galeate; *lip* spurred; spur short; *gynostemium* very short; *rostellum* split; *retinacle* distinct, naked; *gynizus* usually surrounding the opening of the spur, crescentlike, dilated at each end forwards.—*Root* fascicled or palmate; *stem* leafy; *leaves* broad; *spike* close, many-flowered; *bracteæ* lanceolate, leaflike.

1. *Entaticus albidus.* *Whitish hand-orchis.*

Spur blunt, one-third the length of the ovary; *lip* 3-parted; lobes acute, the middle divided.

Orchis pusilla alba odorata, radice palmata, *Raii Syn.* 381, 1.
Satyrium albidum, *Lin. S. P.* 1338.
Orchis albida, *Swartz in Act. Holm.* 1800, 207.
Orchis parviflora, *Lamarck Enc. Meth.* 4, 599.
Habenaria albida, *R. Brown in Ait. H. Kew.* 5, 192.
Gymnadenia albida, *Richard Mem. Mus.* 4, 57.
White handed-musk-orchis.

Mountainous pastures; perennial; June.

Bulbs fasciculate, in pairs; *stem* 15 in. high; *leaves* lanceolate, oval; upper leaves lanceolate, pointed; *flowers* small, whitish, sweet scented; *lip* green.

β. major. *Spike* dense, whitish.

Orchis palmata, thyrso specioso longo, dense stipato, ex viridi albente, *Dillen in Raii Syn.* 382, 24.

2. *Entaticus viridis.* *Green hand-orchis.*

Spur short, purselike; *lip* linear, 3-toothed; *side lobes* pointed; *middle lobe* very short; *bracteæ* half as long again as the flowers.

Orchis palmata minor flore luteo-viridi, *Raii Syn.* 381, 22.
Serapias batrachytes altera, *Ger. em.* 224.
Orchis palmata batrachytes vel myodes, *Park.* 1358.
Satyrium viride, *Lin. S. P.* 1338.
Orchis viridis, *Salisb. Prod.* 7.
Habenaria viridis, *Brown in Ait. H. Kew.* 5, 191.
Gymnadenia viridis, *Richard Mem. Mus.* 4, 57.
Frog satyrion. *Frog orchis.* *Green hand-orchis.*

Fields and pastures; perennial; June to August.

Bulb palmate; *stem* 12 in. high, leafy; *leaves* linear-ovate, upper lanceolate; *spike* loose; *flowers* dull greenish; tipped with brownish purple; *ovary* linear-ovate, yellowish green or brown.

VIII. 142. PLATANTHERA. Richard. *Fox-stones.*

Perigonium arched; *lip* spurred, narrow strap-like, undivided; *cells* of the anther widely distant, narrowed below, and the broad gynizus being placed between them separates them widely apart; *pollen* in long-tailed masses; vesicles very numerous, very minute, linear-prismatic; *retinacle* naked, orbiculate, peltate with a very short stalk, not terminating the caudicle as usual, but lodged as it were on the side and within; *gynizus* appearing as grown to the bottom of the connective, short and rounded, the lower part not going beyond the opening of the spur; *rostellum* none.—*Root* 2-tuberculate; *leaves* radical, 2 or 3; *flowers* white, fragrant; *bracteæ* lanceolate.

Platanthera bifolia. *Two-leafed fox-stones.*

Orchis hermaphroditica bifolia, *Raii Syn.* 380, 17.
Orchis hermaphroditica, *Ger. em.* 211, 1.
Orchis serapias bifolia vel trifolia minor, *Park.* 1350.
Orchis bifolia, *Lin. S. P.* 1331.
Orchis alba, *Lamarck Fl. Fr.* 3, 502.
Habenaria bifolia, *Brown in Ait. H. Kew.* 5, 193.
Platanthera bifolia, *Richard Mem. Mus.* 4, 57.
Butterfly satyrion.

Woods and thickets; perennial; May and June.

Stem 2 feet high, smooth, 2 or 3-leafed at bottom; *leaves* ovate, linear or lanceolate; *spike* long; *flowers* about 12, white, fragrant; *lip* green, hanging down, spur awlshape.

β. *minor*. *Stem* 8 in. high; *spur* oblong; *leaves* 2 or 3 together, narrow; *flowers* yellow, a month later.

Orchis alba bifolia minor, calcari oblongo, *Raii Syn.* 380, 8.
Testiculus psycodes, *Ger. em.* 211, 2.
Orchis sphegodes, sive Testiculus vulpinus primus, *Park.* 1351.
Gnat satyrion. Small butterfly orchis.

IX. 143. HERMINIUM. R. Brown. *Musk-orchis.*

Ovary reclined at the tip; *perigonium* rather bellshape, 2 inner sepales long, 3-cleft; 3 outer ovate; *tip* 3-cut, hastate, with a very short baglike spur; *gynostemium* very short; *cells* of the anthers not narrowed below into a small sheath; *retinacle* naked, rather large, with a striking snail-like hollow underneath, joined to a short blunt rostellum; *pollen* in short, blunt-tailed masses, with only a few nearly cubical vesicles.—*Bulbs* roundish; one horizontally remote, peduncled, smaller; *plant* light green.

Herminium monorchis. *One-tubercled musk-orchis.*
Radical leaves lanceolate.

Orchis odorata moschata, sive Monorchis, *Raii Syn.* 378, 7.
Orchis pusilla odorata, *Park.* 1354.
Ophrys monorchis, *Lin. S. P.* 1342.
Orchis monorchis, *Allioni Pedem.* 1882.
Herminium monorchis, *R. Brown in Ait. H. Kew.* 5, 191.
Yellow sweet orchis. Musk orchis.

Barren chalky pastures; perennial; July.

Stem 8 in. high; *radical leaves* 2 or 3; *spike* close, many-flowered; *flowers* yellowish green; *bracteæ* as long as the ovary.

B. *Perigonium* not galeate; *perule* 0; *anther* stipitate, cells not divided by a septulum; *retinacle* 0; *bursicle* 0.

X. 144. GOODYERA. R. Brown. *Goodyer.*

Ovary reclined at the tip; *perigonium* oblong arched; connivent below, bellying, rather spread out above; *lip* included, spurless, undivided, remarkably concavo-gibbous below; bent into a narrow, grooved strap above; *gynostemium* very short under the gynizus; *gynizus* superficial, circular, rather flat; *rostellum* laminated, upright, very blunt; *proscolla* a short inverted parabola; *anther* stipitate, marginal behind, roundish, acuminate; *pollen* in short

ovate masses, rather cylindrical, agglutinating together by the blunt tip; *vesicles* oblong.—*Root* creeping, sarmentose; *leaves* 5 or 7-ribbed, reticulated; *spike* many-flowered, crowded, pubescent; *flowers* fragrant.

Goodyera repens. *Creeping goodyer.*
Radical leaves ovate; *sepales* and *lip* lanceolate.

Palma Christi radice repente, *Ger. em.* 227, 4.
Satyrium repens, *Lin. S. P.* 1339.
Epipactis repens, *Allioni Ped.* 1853.
Neottia repens, *Swartz Act. Holm.* 1800.
Goodyera repens, *Brown in Ait. H. Kew.* 5, 198.
Creeping satyrion.

Mossy Alpine woods; perennial; June to August.
Stems 9 in. high, pubescent, almost leafless; *radical leaves* small, tesselated with brownish purple; *lip* lanceolate, rose colour; 3 *upper petals* agglutinated.

C. *Perigonium* not galeate; *lip* mostly undivided, rarely spurred; *retinacle* 0; *cells* of the anthers divided by a septulum; *bursicle* 0.

XI. 145. SPIRANTHES. Richard. *Ladies-traces.*

Spike spirally twisted; *ovarium* bent at the tip; *perigonium* grown together in an oblong form, gaping and 2-lipped at the top; *lip* included, spurless, oblong-oval, undivided, bracing by a groove, bent back at top and rather crisp at the edge; *gynostemium* with a very short stipes; *gynizus* nearly elliptic; *rostellum* laminated, upright; *proscolla* oblong or linear; *anther* marginal, behind, heartshape; *pollen* in oblong masses, fastened at the tip; granules globular 3 or 4 cellulate.

Spiranthes autumnalis. *Autumn ladies-traces.*
Leaves radical, oblong, with a very short petiole; *lip* ovate.

Orchis spiralis alba odorata, *Raii Syn.* 378, 8.
Triorchis, *Ger. em.* 218.
Triorchis alba odorata minor, atque etiam major, *Park.* 1354.
Ophris spiralis, *Lin. S. P.* 1340.
Epipactis spiralis, *Allioni Ped.* 1852.
Serapias spiralis, *Scopoli Carn.* 2, 1135.
Ophris autumnalis, *Balbi Misc.* 40.
Neottia spiralis, *Swartz Act. Holm.* 1800, 226.
Spiranthes autumnalis, *Richard Mem. Mus.* 4, 59.
Triple ladies-traces. White orchis. Sweet cullions.

Chalky soils; perennial; August to September.

Bulbs 1 to 3, long; *stem* 6 in. high, smooth below, downy above, viscid; *spike* long, spiral, many-flowered; *bracteæ* lanceolate, longer than the ovary, concave, pubescent; *flowers* small, white, odorous.

XII. 146. NEOTTIA. Lobel. *Birds-nest.*

Ovary pedicelled; *perigonium* laxly connivent and bent into a globe; *lip* spurless, heartshaped; *gynostemium* shortly stipitate: *gynizus* transverse; *rostellum* longer than the gynizus, laminate, obliquely ascending; *proscolla* apiculate, minute, jointed and bent back to the hinder face of the rostellum; *anther* intra-marginal, short-heartshape; *pollen* in oblong masses, agglutinating a little below the tip; *vesicles* globular, 3 or 4-cellulate.—*Root* fascicled; *scape* leafless; *herb* brown, no part green.

Neottia abortiva. *Abortive birds-nest.*

Nidus avis, *Raii Syn.* 382, 1.
Satirium abortivum, sive nidus avis, *Ger. em.* 228.
Orchis abortiva rufa, sive nidus avis, *Park.* 1362.
Ophrys Nidus avis, *Lin. S. P.* 1339.
Epipactis Nidus avis, *Allioni Ped.* 1849.
Neottia Nidus avis, *Rich. M. M.* 4, 59.
Birds-nest.

Woods; perennial; May and June.

Stem 18 in. high with alternate sheathing scales, leafless; *flowers* brownish; sepales blunt; *lip* obcordate, twice as long as the sepales.

XIII. 147. LISTERA. R. Brown. *Tway-blade.*

Ovary pedicelled; *perigonium* loosely bent into a globe; *lip* spurless, hanging, linear, flat, 2-cut; *gynostemium* shortly stipitate; *gynizus* transverse; *rostellum* longer than the gynizus, laminate, obliquely ascending; *proscolla* apicular, minute, jointed and bent back to the hinder face of the rostellum; *anther* intra-marginal, short-heartshape; *pollen* in oblong masses, agglutinating a little below the tip; *vesicles* globular, 3 or 4-cellulate.—*Root* fibrous; *leaves* 2, opposite, sessile, curvately ribbed; *scape* 2-leafed; *flowers* greenish, loosely spiked; *capsules* globular.

1. *Listera ovata.* *Ovate twayblade.*
Leaves ovate.

Bifolium majus, sive Ophris major quibusdam, *Raii Syn.* 385, 1.
Ophris bifolia, *Ger. em.* 403.
Bifolium sylvestre vulgare, *Park.* 504.
Ophrys ovata, *Lin. S. P.* 1340.
Epipactis ovata, *Swartz* 162.
Listera ovata, *R. Brown in Ait. H. Kew.* 5, 201.
Neottia latifolia, *Richard Mem. Mus.* 4, 59.
Common twayblade.

Woods and meadows; perennial; June and July.
Stem 12 in. high, 2-leafed; *flowers* pedicelled, green.

2. *Listera cordata.* *Heartleafed twayblade.*
Leaves heartshape.

Bifolium minimum, *Raii Syn.* 385, 2.
Ophrys cordata, *Lin. S. P.* 1340.
Epipactis cordata, *Swartz* 162.
Listera cordata, *R. Brown in Ait. H. Kew.* 5, 201.
Neottia cordata, *Richard Mem. Mus.* 4, 59.
Least twayblade.

Spongy Alpine heaths; perennial; July
Stem 6 in. high; *flowers* greenish.

XIV. 148. CEPHALANTHERA. Richard.

Bastard-hellebore.

Ovary sessile, bald, not twisted; *perigonium* upright, connivent; *lip* spurless, clasping, interrupted; hypochilium gibbous at the back; epichilium bent back at the tip; *gynostemium* long, straight; *gynizus* transversely oblong, prominent; *rostellum* 0; *anther* marginal, elliptical roundish, fastened to the back of the gynizus by its base, the other part overtopping the gynizus, the cells growing forwards on a connective wider than themselves; *pollen* in linear masses, adhering only to the back of the gynizus by their base; *vesicles* simple.—*Rhizoma* creeping; fibres fleshy; *stem* leafy; *leaves* amplexicaul, 2-rowed, lanceolate, ribbed; *spike* loose; *flowers* upright, bracteate; *ovary* linear.

1. *Cephalanthera grandiflora.* *Largeflower bastard-hellebore.*

Leaves oblong, lanceolate, sessile; *bracteæ* longer than the flower; *lip* obtuse, shorter than the sepales.

Helleborine flore albo, *Raii Syn.* 383; *Ger. em.* 441, 2.
Elleborine minor flore albo, *Park.* 218.
Serapias loncophyllum, *Lin. Suppl. Pl.* 405.
Serapias grandiflora, *Murray Syst. Veg. ed.* 13, 679.
Serapias lancifolia, *Murray Syst. Veg. ed.* 14, 815.
Epipactis pallens, *Swartz.* 160.
Serapias alba, *Salisb. Prod.* 8.
Cephalanthera pallens, *Richard Mem. Mus.* 4, 60.
Wild white-hellebore.

Woods; perennial; May and June.
Stem 12 in. high; *flowers* 3 to 8, upright, large, white.

2. *Cephalanth. ensifolia.* *Sword-leafed bastard-hellebore.*
Leaves lanceolate, pointed, nearly 2-rowed; *bracteæ* very small, awlshape; *lip* only half as long as the sepales.

Helleborine foliis prælongis angustis acutis, *Raii Syn.* 384, 7.
Serapias longifolia γ, *Huds. Fl. Angl.* 394.
Serapias xiphiophyllum, *Lin. Supp. Pl.* 404.
Serapias ensifolia, *Murray Syst. Veg.* 815.
Serapias nivea, *Villars Dauph.* 2, 52.
Epipactis ensifolia, *Wild S. P.* 4, 85.
Cephalanthera ensifolia, *Richard Mem. Mus.* 4, 60.

Woods; perennial; June to August.
Stem 12 in. high; *flowers* white; *lowest bractea* as long as the flower.

3. *Cephalanthera rubra.* *Red bastard-hellebore.*
Leaves lanceolate; *bracteæ* longer than the ovary; *lip* pointed, with raised wavy lines.

Helleborine montana angustifolia purpurascens, *Dillen in Raii Syn.* 384, 7.
Helleborine angustifolia sexta Clusii, *Ger. em.* 442, 3.
Elleborine angustifolia spicata versicolor, *Park.* 218.
Serapias rubra, *Murray Syst. Veg. ed.* 14, 816.
Serapias longifolia δ, *Huds. Fl. Angl.* 394.
Epipactis rubra, *Willd. S. P.* 586.
Cephalanthera rubra, *Richard Mem. Mus.* 4, 60.
Narrow-leafed wild sneeze-wort.

Rocky mountainous woods; perennial; June.
Stem 12 in. high; *flowers* purple.

XV. 149. EPIPACTIS. Dioscorides. *Helleborine.*

Ovary pedicelled, not twisted, pubescent; *perigonium* spread; *sepales* not quite alike; *lip* spurless, rather spread backwards, not clasping, interrupted; hypochilium concavely bunched; epichilium inwardly 2-bunched at the bottom; *gynostemium* very short, and in respect to the ovary declining backwards; *gynizus* rather square, prominent backwards; *rostellum* apiculate, very short, blunt;

anther marginal, placed behind, heartshape, blunt pointed; *pollen* in oblong ovate masses, agglutinating near the tip; vesicles appearing 3 or 4 globular.—*Rhizoma* creeping; fibres fleshy; *stem* leafy; *leaves* amplexicaul, 2-rowed, ovate, ribbed; *spike* loose; *flowers* drooping, bracteate; *ovary* ovate.

1. *Epipactis latifolia.* *Broad-leafed helleborine.*

Lower bracteæ longer than the flowers; *lip* pointed, shorter than the sepales; *leaves* ovate.

Helleborine latifolia montana, *Raii Syn.* 383, 1.
Helleborine, *Ger. em.* 442, 1.
Elleborine flore viridante, *Park.* 218.
Serapias Helleborine α, *Lin. S. P.* 1344.
Serapias latifolia, *Murray Syst. Veg.* 814.
Epipactis latifolia, *Willd. S. P.* 5, 83.
Wild white hellebore. Common bastard hellebore.

Shady woods; perennial; July and August.

Stem 2 feet high; *flowers* small, purplish.

β. *atro-rubens.* *Flowers* deep red, late; *stem* very downy.

Helleborine altera atro-rubente flore, *Raii Syn.* 313, 2.
Elleborine flore atro-rubente, *Park.* 218.

2. *Epipactis palustris.* *Marsh helleborine.*

Bractea shorter than the flowers; *lip* crenate, blunt, as long as the sepales; *leaves* lanceolate.

Helleborine palustris nostras, *Raii Syn.* 384, 6.
Serapias longifolia γ, *Lin. S. P.* 1345.
Serapias latifolia palustris, *Huds. Fl. Ang.* 393.
Serapias palustris, *Scop. Carn.* 2, 204.
Epipactis palustris, *Willd. S. P.* 5, 84.
Marsh hellebore.

Marshes; perennial; July and August.

Stem 12 in. high; *sepales* variegated with purple; 3 outer green; 2 inner white.

XVI. 150. CYPRIPEDIUM. *Ladies-slipper.*

Ovary not twisted, pedicell short; *perigonium* spread loosely and rather cross-like; lower or odd sepales grown together into one, placed under the lip, and more or less split at the tip; *lip* spurless, blown out like a slipper; *gynostemium* rather short, three-cut behind and above, with the side divisions anther-bearing before below the tip, the intermediate division very large, bent in, without any anther, and therefore an imperfect anther or staminodium; *gynizus* (or stigma) footstalked, rather peltate; nearly deltoid, placed between and above the anthers; *clinandrium* and *rostellum* 0;

anthers 2, joined nearly opposite, fixed immediately on their support, roundish; *pollen* pulpy-granular.—*Rhizoma* creeping; fibres fleshy; *stem* leafy; *leaves* amplexicaul, many-ribbed; *flower* single, drooping.

Cypripedium ferrugineum. *Brown ladies-slipper.*

Stem leafy; *sepales* flat; *staminodium* elliptic, obtuse, channelled.

Calceolus Mariæ, *Raii Syn.* 385, 1; *Ger. em.* 443, 1.
Elleborine major seu Calceolus Mariæ, *Park.* 217.
Elleborine ferruginea, *Dalech. Hist.* 1146.
Cypripedium Calceolus, *Lin. S. P.* 1346.

Mountainous woods; perennial; June.

Stem 12 in. high, 1 rarely 2-flowered, leafy; *sepales* brownish purple; *lip* shorter than the sepales, compressed, yellow, veined; *staminodium* yellow dotted with red.

D. *Perigonium* not galeate; *lip* spurless; *retinacle* 0; *septula* persistent; *ovary* pedicelled; *bursicle* 0.

XVII. 151. PSEUDORCHIS. *Dwarf-orchis.*

Ovary pedicelled, generally imperfect and abortive; *perigonium* loosely spread; *lip* behind, sessile at the base of the gynostemium, reverse-oval, channelled, above bent back, undivided; *gynostemium* oblong, rather bent, much thicker below, with winged edges on the side of the gynizus at the upper part; *gynizus* rather square, sunk in; edge prominent; *rostellum* 0; *anther* marginal, placed above, short-heartshape; cells roundish, very simple within; *pollen* in globular nearly equal masses. — *Herb* light green; *bulb* ovate, scaly; *base* rooting; *leaves* 2 or 3, radical, petiolate, nerved; *scape* angular; *racemus* loose, few-flowered; *flowers* yellowish; *bracteæ* short.

Pseudorchis Loeselii. *Loesel's dwarf-orchis.*

Leaves 2, ovate, lanceolate, opposite; *sepales* linear; *lip* ovate, bent back at the tip; *bracteæ* shorter than the pedicells.

Pseudo-orchis bifolia palustris, *Raii Syn.* 382, 1.
Orchis bifolia bulbosa, *Ger. em.* 403.
Chamæorchis latifolia Zelandiæ, *Park.* 1354.
Ophrys Loeselii, *Lin. S. P.* 1341.
Ophrys lilifolia, *Huds. Fl. Angl.* 389.
Ophrys paludosa, *Fl. Dan.* 877.
Ophrys pulchella, *Salisb. Prod.* 8.
Cymbidium Loeselii, *Swartz.*
Malaxis Loeselii, *Swartz.* 165.
Liparis Loeselii, *Richard Mem. Mus.* 4, 60.
Bulbous twayblade.

Sandy moors; perennial; May to July.

Root bulbose, scaly; *scape* 4 in. high; *flowers* lemon-colour.

XVIII. 152. MALAXIS. Swartz. *Malaxis.*

Ovary pedicelled, generally imperfect and abortive; *perigonium* very much spread vertically; the odd sepale entirely spread out, hanging; the paired sepales upright, the inner much narrower, bent back or turned over on the sides of the former; *lip* behind, upright, expanded, rather heart-shape, pointed, generally undivided, rarely 2-cut with an intermediate point, embracing the bottom of the gynostemium by a slight or deep cut at the bottom, and enclosing the bases of all the sepales; *gynostemium* very short, upright, ending above and forwards in a truncate lamina, nearly undivided, or at most 3-cut; *gynizus* slightly depressed into a lamina; *rostellum* 0; *anther* for some time intramarginal, entirely behind, short; cells ovate, very simple within; *pollen* in oblong masses.—*Bulb* ovate, scaly, rooting at the base; *leaves* few, alternate, sheathing; *scape* angular; *raceme* many-flowered; *bracteæ* small; *herb* light green; *leaves* few; *flowers* greenish.

Malaxis paludosa. *Marsh malaxis.*

Leaves 3 or 4, spathulate, rough at the tip.

Orchis minima bulbosa, *Dillen in Raii Syn.* 378, 9.
Bifolium palustre, *Park.* 505; *Raii Syn.* 385, 3.
Ophrys paludosa, *Lin. S. P.* 1341.
Malaxis paludosa, *Swartz*, 165.
Malaxis palustris, *Richard Mem. Mus.* 4, 60.
Marsh twayblade.

Spongy bogs; perennial; June and July.

Scape 4 in. high, rather naked; *flowers* yellow-green; 3 *outer sepales* twice as large as the inner; *lip* only half as long as the sepales.

XIX. 153. CORALLORHIZA. Haller. *Coral-root.*

Ovary pedicelled, pedicell short; *perigonium* arched in an oblong form; *lip* oblong reversed-oval, channelled below, slightly cut on each edge with a small crenule, spread over on the inside with prominences disposed lengthwise, above spreading and turned back; *perule* very short, adnate; *gynostemium* long, wingless, rather channelled before with prominent edges; *gynizus* nearly semiorbiculate; *ros-*

tellum apicular, prominent behind; *anther* marginal, placed at top, short, rather 2-globular; *cells* 2-cellulate, opening rather transversely; *pollen* in 2 distinct masses, nearly globular, one before, one behind.—*Herb* light brown, leafless; *root* zinziberaceous, fleshy; *spike* loose, few-flowered; *bracteæ* very small.

Corallorhiza innata. *Innate coral-root.*

Spur short, adnate; *root* very much branched.

Dentaria minor, *Ger. em.* 1585, 2.
Ophrys corallorhiza, *Lin. S. P.* 1339.
Cymbidium corallorhiza, *Swartz*, 176.
Corallorhiza innata, *Brown in Ait. Hort. Kew.* 5, 209.
Corallorhiza Halleri, *Richard Mem. Mus.* 4, 61.

Moist woods; perennial; August and September.

Stem 9 in. high, yellowish brown, scaly; *scales* alternate; *flowers* small; *capsules* widely elliptic, hanging down.

Fam. XVII. 22. ALISMACEÆ. Richard. *Alismacearum sectio*, De Candolle. *Juncorum sectio*, Jussieu. *Tripetaloidearum genera quædam*, Lin.

Perigonium 6-sepaled; 3 outer sepales herbaceous, persisting; 3 inner petaloid, coloured; *stamens* 6 or indefinite; *ovaries* many, free, 1-celled, 1 or 2-seeded; *styles* and *stigmata* many; *camares* 1 or 2-seeded; *seeds* erect, on the sutures; *perisperm* 0; *corculum* incurved; *radical* below.—*Root* fibrous, with roundish tubers; *herb* aquatic, stemless, perennial; *leaves* petiolate, longitudinally ribbed; *flowers* verticillately spiked.

Stamens 6; *flowers hermaphrodite.*

Camares 2 or 3-seeded; *etarion* stellate ..... DAMASONIUM. 156.

Camares 1-seeded; *etarion* globose ..... ALISMA. 155.

Stamens many; flowers unisexual.

Camares 1-seeded; *etarion* globose .. SAGITTARIA. 154.

I. 154. SAGITTARIA. Lobell. *Arrowhead.*

Perigonium 6-sepaled; *stamens* many, indefinite; *ovaries* many, indefinite; *etarion* globose; *camares* 1-seeded, distinct, compressed, edged.—*Leaves* sagittate, palmate-ribbed; *spike* verticillate; *flowers* unisexual? the upper male.

Sagittaria aquatica. *Water arrowhead.*

Leaves lanceolate, pointed, sagittate; *lobes* lanceolate, straight; *scape* simple.

Sagitta, *Raii Syn.* 258, 1.
Sagitta major et minor, *Ger. em.* 416, 1 and 2.
Sagitta minor latifolia, *Park.* 1247.
Sagittaria sagittæfolia, *Lin. S. P.* 1410.

Watery places; perennial; July and August.

First leaves strapshape, sunk; the succeeding sagittate, reticulately veined; *scape* 6-angled; *flowers* 3 in a whorl; *bracteæ* ovate; *male flowers* with 1 to 6 styles.—*Tuber* nutritive, eaten by the Chinese, by whom the plant is cultivated in watery places.

β. *minor.* *Plant* much smaller.

Sagitta aquatica omnium minima, *Raii Syn.* 258, 2.

II. 155. ALISMA. Cordus. *Water-plantain.*

Perigonium 6-sepaled; *stamens* 6; *ovaries* many, indefinite; *etarion* roundish; *camares* 1-seeded, distinct.—*Root* fibrous; *leaves* ovate or lanceolate, curved-ribbed; *flowers* umbelled or panicled; *branches* in threes, verticillate.

1. *Alisma major.* *Great water-plantain.*

Leaves ovate, acute, 7-ribbed; *etarion* depressed; *camares* verticillate, obtusely 3-sided.

Plantago aquatica, *Raii Syn.* 257, 1.
Plantago aquatica major, *Ger. em.* 417, 1; *Park.* 1245.
Alisma Plantago aquatica, *Lin. S. P.* 486.
Plantaginoides seu Plantago aquatica, *Knaut Comp.* 156.
Alisma Plantago, *Smith Fl. Brit.* 400.

Watery places and river-sides; perennial; July.

Scape 4 feet high, 3-sided, upright; *panicle* verticillately branched; *flowers* blueish white.—*Tubers* farinaceous, much recommended in hydrophobia, juice used for drying up the milk in breasts.

β. *lanceolata.* *Leaves* strapshaped.

Plantago aquatica longifolia, *Raii Syn.* 257, 1*.
Alisma lanceolata, *With. Bot. Arr.* 362.
Narrow-leafed water-plantain.

2. *Alisma natans.* *Floating water-plantain.*

Leaves elliptical, obtuse; *peduncles* single; *etarion* depressed; *camares* verticillate, compressed, streaked.

Damasonium repens, *Vaillant. Mem. Ac. Sc.* 1719.
Alisma natans, *Lin. S. P.* 487.

Alpine lakes; perennial; July and August.

Herb floating; *stem* branched, leafy; *leaves* alternate; lower submersed, linear; *peduncles* opposite to the leaves or terminal, 1-flowered; *flowers* white.

3. *Alisma ranunculoides.* *Ranunculus water-plantain.*

Leaves linear, lanceolate; *etarions* globose; *camares* 5-sided, incurved.

Plantago aquatica minor, *Raii Syn.* 257, 2; *Park.* 1215.
Plantago aquatica humilis, *Ger. em.* 417, 3.
Alisma ranunculoides, *Lin. S. P.* 487.
Dwarf water-plantain.

Watery places; perennial; August.

Scape 12 in. high, upright, round; *peduncles* simple, verticillate; *flowers* pale, purple.

β. *repens.* *Stem* decumbent, rooting.

Alisma repens? *Davis Welsh Botanology.*

III. 156. DAMASONIUM. Dalechamp. *Starhead.*

Perigonium 6-sepaled; *stamens* 6; *ovaries* 6 or 8, joined at the base; *camares* 2-seeded; *etarion* stellate.—*Leaves* lanceolate or ovate; *flowers* umbelled, hermaphrodite.

Damasonium Dalechampii. *Dalechamp's starhead.*

Leaves cordate, oblong, obtuse; *etarion* 6-rayed.

Damasonium stellatum Dalechampii, *Raii Syn.* 272.
Plantago aquatica minor stellata, *Ger. em.* 417, 2.
Plantago aquatica minor muricata, *Park.* 1245.
Alisma Damasonium, *Lin. S. P.* 486.
Damasonium stellatum, *Pers. Syn.* 1, 400.
Star-headed water-plantain.

Bogs and stagnant waters; perennial; June and July.

Scape 9 in. high, round, verticillately spiked; *flowers* white.

Fam. XVIII. 23. BUTOMACEÆ. Richard. *Alismacearum pars*, De Candolle. *Juncorum pars*, Jussieu. *Tripetaloidearum genus*, Linnæus.

Perigonium nearly petaloid, 6-sepaled; *stamens* 9 or many; *ovaries* many, free, 1-celled, many-seeded; *styles* and *stigmata* many; *pericarp* many-seeded; *seeds* on the netlike veins on the sides of the valves, ascending; *perisperm* 0; *corculum* straight or bent like a horseshoe.—*Plant* aquatic, stemless; *leaves* ribbed lengthways; *footstalks* sheathing; *foliation* involute; *flowers* umbelled, terminal; *bracteæ* sheathing, at the base of the peduncles.

157. BUTOMUS. Theophrastus. *Gladiole.*

Perigonium 6-sepaled; outer sepales smaller; *stamens* 9; *ovaries* 6, longly beaked; *pericarp* twisted inwardly, opening at the edge; *valves* joined side by side at the base; *seed* linear, oblong, straight, round, streaked lengthways; *corculum* straight.—*Rhizoma* tuberous, creeping; *leaves* angular; *scape* round.

Butomus umbellatus. *Umbelled gladiole.*

Leaves long, linear, 3-sided.

Butomus, *Raii Syn.* 273, 1.
Gladiolus palustris Cordi, *Ger. em.* 29, C. 1.
Juncus floridus, *Park.* 1197.
Butomus umbellatus, *Lin. S. P.* 532.
Flowering rush. Water gladiole.

Ditches and river-sides; perennial; June and July.

Leaves smooth, flat above, acute; *scape* 2 to 4 feet high; *flowers* reddish, beautiful.

Fam. XIX. 24. JUNCAGINEÆ. Richard. *Alismacearum pars,* De Candolle. *Juncorum pars,* Jussieu.

Perigonium herbaceous or nearly petaloid, 6-sepaled; *stamens* 6; *filaments* short; *ovaries* 3 or 6, 1-celled; *stigmata* 3 or 6, sessile; *camares* 1 or 2-seeded; *seeds* basillary, upright; *perisperm* 0; *corculum* straight.—*Root* fibrous; *leaves* linear, rushlike, sheathing at the base; *flower* spiked or racemose.

Sepales equal; *etarion* depressed;
camares inflated, spread..... Scheuchzeria. 158.

Sepales 3 inner petaloid; *etarion* upright;
camares pendulous, connivent..... Triglochin. 159.

I. 158. SCHEUCHZERIA. Linnæus. *Scheuchzer.*

Perigonium herbaceous, 6-sepaled; *sepales* equal, persistent; *stamens* 6; *filaments* short; *anthers* linear, long; *ovaries* 3 or 6, compressed; *stigma* sessile, lateral; *camares* inflated, reflexed, distant; *seeds* 1 or 2, oblong.—*Root scaly,* creeping; *leaves* few, rushlike; *scape* round; *spike* loose; *flowers* greenish; *bracteæ* at the bottom of the peduncle.

Scheuchzeria palustris. *Marsh scheuchzer.*

Leaves bristlelike, channelled; *raceme* upright, few-flowered.

Juncus floridus minor, *Bauh. Pinax*, 12.
Juncoidi affinis palustris, *Scheuchz. Gram.* 336.
Scheuchzeria palustris, *Lin. S. P.* 482.

Spongy bogs; perennial; June.

Scape 9 in. high; *leaves* longer than the scape; *spike* 3 to 6-flowered.

II. 159. TRIGLOCHIN. Linnæus. *Arrowgrass.*

Perigonium 6-sepaled; *sepales* deciduous, 3 inner nearly petaloid; *stamens* 6, very short; *ovaries* 3 or 6, connivent; *stigmata* 3 or 6, radiating at the tip of the ovaries; *pericarps* (camares) regmata? 3 or 6, 1 or 2-seeded, affixed at top to a common axis.—*Root* fibrous, thickened in the upper part as if bulbose; *scape* round; *leaves* semicylindrical, bundled, sheathing at the base; *spike* linear, many-flowered; *bracteæ* 0.

Triglochin palustre. *Marsh arrowgrass.*

Capsules 3, smooth; *etarion* linear, narrowed at bottom.

Juncago palustris vel vulgaris, *Raii Syn.* 435, 1.
Gramen aquaticum spicatum, *Ger. em.* 13, 2.
Gramen aquaticum spicatum alterum, *Park.* 1279.
Triglochin palustre, *Lin. S. P.* 482.
Spiked watergrass.

Meadows and sides of water; perennial; July.

Leaves linear, channelled; *scape* 12 in. high.

2. *Triglochin maritimum.* *Sea arrowgrass.*

Capsules 6, furrowed; *etarion* oval.

Gramen maritimum spicatum, *Raii Syn.* 435, 1; *Park.* 1270.
Gramen spicatum alternum, *Ger. em.* 20.
Triglochin maritimum, *Lin. S. P.* 483.
Saltmarsh spikegrass.

Meadows near the sea; perennial; May to August.

Leaves broader and more fleshy than the former.

Fam. XX. 25. HYDROCHARIDEÆ. De Candolle.

Perigonium petaloid, 6-sepaled, adherent to the ovary; *stamens* 9 to 20, on the ovary in hermaphrodite flowers, or in its place in male flowers; *ovary* 1, 1 or many-celled; *stigmata* 3 or 6, 2-cut; *pericarpium* 1 or 6-celled; *seeds* many; *spermodermis* simple; *perisperm* fleshy; *corculum* basillary.—*Herb* aquatic, floating; *root* fibrous; *flowers* hermaphrodite or unisexual.

Stamens 6; *capsules* roundish, leathery
HYDROCHARIS. 160.

Stamens 20; *capsules* narrowed, fleshy
STRATIOTES. 161.

I. 160. HYDROCHARIS. Linnæus. *Frog-bit.*

Dioicous. — MALE. *Spathe* 2-parted, 3-flowered; *perigonium* petaloid, 6-sepaled; 3 inner sepales largest; *stamens* 9, in 3 series, on a barren ovary.— FEMALE. *Spathe* 0; *perigonium* petaloid, 6-sepaled, adherent to the ovary; *styles* 6; *stigmata* acute, 2-cut; *pericarpium* leatherlike, rounded, 6-celled, many-seeded.—*Herb* floating, knotted, stoloniferous; *knots* leaf and flower-bearing; *leaves* petiolate, in bundles, roundish; *foliation* involute; *flowers* whitish.

Hydrocharis asarifolia. *Asarum-leafed frogbit.*

Stratiotes foliis asari, semine rotundo, *Raii Syn.* 290, 1.
Morsus ranæ, *Ger. em.* 818.
Nymphæa alba minima, seu Morsus ranæ, *Park.* 1252.
Hydrocharis Morsus ranæ, *Lin. S. P.* 1466.
Frog-bit. Least water-lily.

Ditches and stagnant waters: perennial; July.

Leaves floating, kidneyshape; *flowers* white, footstalked.

β. *odoratissima.* *Flowers* double, very odoriferous.

Morsus ranæ flore pleno odoratissimo, *Raii Cat. Cant.* 101.

II. 161. STRATIOTES. Dioscorides. *Water-soldier.*

Spathe compressed, persisting, deeply 2-parted, carinate, 1-flowered; *perigonium* adherent, 6-sepaled; *sepales* soldered at the base; 3 outer sepales smaller, greenish; 3 inner larger, coloured; *stamens* 10 to 20, on the edge of the ovary; *styles* 6, 2-cut; *pericarpium* 6-sided, attenuated, fleshy, 6-celled; *cells* divided by a double membrane filled with pulp; *seeds* many, rather angular, parietal; *spermodermis* simple, membranaceous.—*Herb* floating, soboliferous; *leaves* sheathing, crowded, radical, vascular, angular; *scape* axillary, 1-flowered; *flowers* often abortive, or dioicous.

Stratiotes aloides. *Aloe water-soldier.*

Leaves swordshape, triangular; *edge* serrate with cartilaginous teeth.

Stratiotes foliis aloes, semine longo, *Raii Syn.* 290, 1.
Militaris aizoides, *Ger. em.* 825.
Stratiotes sive Militaris aizoides, *Park.* 1249.
Stratiotes aloides, *Lin. S. P.* 754.
Water sengreen. Freshwater soldier. Water aloe.

Ditches and stagnant water; perennial; July.

Leaves brittle, blackish green; *scape* 2-edged, serrated; *flowers* white.

SERIES III.

PLANTÆ EXOGENÆ.

Dicotyledones, Jussieu.
Exorhizeæ, Richard.

PLANTS composed of cellular texture, with lymphatic, spiral, and proper vessels; and with cortical pores. *Root* more or less conical, often without any pith, otherways like the trunk. *Trunk* more or less conical, and composed, at least, of two parts growing by different modes, as may be best seen in the arborescent species, in which we find 1°. a central pith enclosed in a medullary canal, emitting on all sides radiating medullary productions; 2°. annual layers, more or less woody, disposed concentrically round the pith, the outer layers being the youngest and the least hard; 3°. cortical layers, distinct from the wood, but scarcely distinguishable from one another, and differing from the last in the mode of growth, the inner ones being the youngest, and the external being the oldest. *Leaves* opposite or verticillate, sometimes becoming alternate by the growth of the stem, disposed more or less spirally on the stem, often articulated on the stem, or truly compound; always furnished with ribs that anastomose with one another. *Flowers* always distinct, usually furnished with a double perigonium, parts usually five in number, or divided into five segments. *Stamens* rarely 3, 6, or 9, or any multiple of 3. *Corculum* most commonly with 2 cotyledons. *Cotyledons* 2, placed opposite, never alternate; very rarely many, verticillate; and, in leafless plants, none.

This series contains full two thirds of the whole number of natural families; but the arrangement of these families among themselves has not yet been determined, and therefore the families of this series are arranged by De Candolle, for the present, into four artificial subseries resting upon the differences observable in their petals and stamens, until a natural arrangement by their affinities shall be discovered.

SUB-SERIES.

Perigonium single, *petals* 0, or soldered to the calyx ..... *P. E. monochlamydeæ.* A.

Perigonium double; *petals* soldered into one, stamen-bearing, inserted into the thalamus ..... *P. E. corolliflorœ.* B.

Perigonium double; *petals* many, distinct, or soldered together, inserted along with the stamens on the calyx..... *P. E. calyciflorœ.* C.

Perigonium double; *petals* many, distinct, inserted along with the stamens on the thalamus..... *P. E. thalamiflorœ.* D.

Subseries III. A. PLANTÆ EXOGENÆ MONOCHLAMYDEÆ.

Dicotyledones apetalæ, Jussieu Gen. Plant.

Dicotyledones diclines irregulares, Jussieu Gen. Plant.

Dicotyledones incompletæ, De Candolle Syn. Fl. Gall.

Perigonium single; *petals* none, or soldered to the calyx.

FAMILIES.

A. *Flowers unisexual, male amentaceous; perisperm fleshy; leaves biennial.*

Nuculæ many, reversed, in a cone.. ABIETIDEÆ. 1.
Nuculæ few, upright, in a galbulum CUPRESSIDEÆ. 2.
Nucula single, upright..... TAXIDEÆ. 3.

B. *Flowers unisexual, male amentaceous; perisperm none; leaves annual.*

Nucula, in a cone ..... BETULIDEÆ. 5.
Gland or *nucula,* in a cupula..... CORYLIDEÆ. 6.
Capsule 1 or 2-celled; *seed* comose SALICINÆ. 4.
Nut 1-seeded, in an ament ..... MYRICEÆ. 7.

C. *Flowers hermaphrodite; or unisexual, the male not amentaceous; ovary free.*

Utriculus; perisperm 0; *flowers* unisexual URTICEÆ. 9.
Utriculus; perisperm farinaceous; *leaves* sheathing at the base ..... POLYGONEÆ. 15.

Utriculus; perisperm farinaceous;
leaves naked at the base..... CHENOPODEÆ. 16.
Pyxidium 1-celled, 1-seeded;
styles 3; *stamens* 3 or 5..... AMARANTHACEÆ. 17.
Regma 2 or 3-coccous ..... EUPHORBIACEÆ. 10.
Samara; *stamens* 3 to 6 ..... ULMACEÆ. 8.
Drupe; *stamens* 8 ..... THYMELEÆ. 14.
Drupe; *stamens* 4 ..... ELÆAGNEÆ. 13.

D. *Flowers hermaphrodite; ovary adherent.*

Stamens hypogynous; *drupe?* globose
SANTALACEÆ. 12.
Stamens epigynous; *carcerule* 6-celled
ARISTOLOCHIÆ. 11.

Fam. I. 1. ABIETIDEÆ.

Flowers unisexual.—MALE. *Scales* of the ament imbricate; *anthers* 1, sessile, 2-celled.—FEMALE. *Scales* of the strobile many, imbricate, 2-flowered; *ovaries* 2, on the axillæ of the scales; *style* deflexed; *stigma* near the base of the ovary; *nucula* 1-celled, winged; *kernel* pendulous; *perisperm* fleshy; *corculum* central, straight; *cotyledons* many; *radicle* above.—*Trees* resinous; *leaves* biennial, slender, acerose, opposite, verticillate or fascicled.

Scales of the cone clavate, angular;
leaves biennial, 2 together ..... PINUS. 1.
Scales of the cone slender, rounded;
leaves biennial, single ..... ABIES. 2.
Scales of the cone slender, rounded;
leaves annual, in bundles..... LARIX. 3.

Gen. I. 1. PINUS. Pliny. *Pine.*

Monoicous.—MALE. *Ament* racemose, compact, terminal, scaly; *stamens* 2, on the tip of the scales of the ament; *anthers* 1-celled.—FEMALE. *Ament* simple, imbricate; *scales* pointed; *ovaries* 2; *stigmata* 2, 3-cut; lobes tailed; *scales* of the cone oblong, clubbed, woody, imbricate; tip angular; *nucules* 2 on each scale, covered with a membranaceous appendage; *cotyledons* 4 to 8.—*Tree; branches* verticillate; *buds* large; *leaves* biennial, 2 or 3 from the same sheath.

Pinus sylvestris. *Wild pine.*

Leaves in pairs, stiff; *cones* generally in pairs, ovate, conical, acute, as long as the leaves, rounded at bottom; *tips* of the scales (especially of the lower ones) very pyramidical.

Pinus sylvestris foliis brevibus glaucis, conis parvis albentibus, *Raii Syn.* 442.
Pinus sylvestris, *Ger. em.* 1356; *Lin. S. P.* 1418.
Scotch fir. Pineaster.

Alpine mountains, also cultivated; arborescent; May.

Trunk tall, straight, determinately branched, dark green; *leaves* smooth, pointed.—Wood used for timber, *red* or *yellow deals;* juice resinous, becoming solid; *bark* used to tan leather, and, mixed with meal, made into bread in the Northern countries.

II. 2. ABIES. Pliny. *Fir.*

Monoicous.—Male. *Ament* solitary, not racemose; *stamen* 1, on the tip of the scales of the ament; *anther* 2-celled. —Female. *Ament* simple; *ovaries* 2; *stigmata* 2, 3-cut; *lobes* glandular; *scales* of the cone imbricate, thin, rounded at the tip and not thickened; back not umbilicated; *cotyledons* 3 to 9.—*Trees* very tall, conical; *buds* large; *leaves* alternate, 2-rowed, scaly, large, acerose, linear; *aments* terminating the secondary branches.

a. *Cones hanging down; leaves scattered.*

1. *Abies excelsa.* *Tall fir.*

Leaves 4-sided; *cones* cylindrical; *scales* rhomboidal, flat, edge torn and spread; *bracteæ* minute.

Abies, *Raii Syn.* 441, 1: *Ger. em.* 1363; *Park.* 1539.
Pinus Abies, *Lin. S. P.*
Abies excelsa, *Salisb. T. L. S.* 8, 314.
Female fir. Norway fir. Mast-tree.

Cultivated for timber.

Tree evergreen, straight; *bark* rough, scaly, brown; *branches* verticillate.—Wood used for timber, *white deals; juice* resinous, becoming solid.

b. *Cones upright; leaves 2-rowed.*

2. *Abies pectinata.* *Pectinate fir.*

Leaves flat, nicked; *scales* of the cone very blunt, depressed.

Pinus Picea, *Lin. S. P.* 1420.
Pinus Abies, *Fl. Dan.* 193.
Abies taxifolia, *H. P.*
Abies pectinata, *De Cand. Syn. Fl. Fr.* 2063.
Silver fir.

Cultivated for timber.

Tree tall; *bark* smooth, whitish.

III. 3. LARIX. Pliny. *Larch.*

Monoicous. — MALE. *Ament* solitary, not racemose; *scales* stamenbearing; *anther* 1, 2-celled. — FEMALE. *Ament* simple; *ovaries* 2; *stigmata* hemispherical, glandular, pubescent; *scales* of the cone imbricate, thin, rounded at the tip, not thickened, nor umbilicated; *cotyledons* 5 to 9. —*Trees* tall, pyramidical; *branches* alternate; *buds* small: *leaves* acerose, in bundles, becoming single; annual or biennial; *flowers* terminal, above or lateral.

Larix Europæa. *European larch.*

Cone ovate, oblong, obtuse; *edge* of the scales reflex, torn.

Larix, *Ger. em.* 1365.
Pinus Larix, *Lin. S. P.* 1420.
Larix decidua, *Miller Dict.*
Larix pyramidalis, *Salisb. T. L. S.* 8, 314.

Cultivated for timber.

Tree middling high; *bark* thick, wrinkled; *leaves* annual; *aments* reddish purple.—Wood hard, reddish in the middle, lasting; charcoal burns slow, used by smiths on the continent; juice resinous.

Fam. II. 2. CUPRESSIDEÆ.

Flowers unisexual; *flower-buds* naked.—MALE. *Ament* many-flowered; *scales* imbricate, opposite, 1-flowered; *anthers* 1 or 2, sessile, 2-celled.—FEM. *Ament* with few scales; *scales* peltate; *ovary* 1 or many on each scale; *stigmata* sessile, on the tip of the ovary; *nucula* 1-celled, in the enlarged woody scales of a galbulus, or the fleshy soldered scales of an arcesthide; *kernel* pendulous; *perisperm* fleshy; *corculum* central, straight; *cotyledons* 2; *radicle* above.

I. 4. JUNIPERUS. Pliny. *Juniper.*

Dioicous.—MALE. *Ament* peduncled, 10 to 14-flowered; *scales* imbricate, 3-sided, pedicelled, peltate; *anthers* 2 to 4, 2-celled, sessile.—FEMALE. *Ament* sessile, globose; *scales* 3, fleshy, concave, becoming soldered; *stigmata* opening; *arcesthide* globose, 3-seeded; *nucule* glandular on the outside. —*Shrubs* evergreen; *leaves* verticillate, long or linear; *ament* axillary, on the under side of the branches.

1. *Juniperus communis.* *Common juniper.*

Leaves by threes, spreading, narrow, mucronate, longer than the arcesthides; *arcesthides* globose.

Juniperus vulgaris, baccis parvis purpureis, *Raii Syn.* 444, 1.
Juniperus, *Ger. em.* 1372, 1.
Juniperus vulgaris, *Park.* 1028.
Juniperus communis, *Lin. S. P.* 1470.

Heaths and commons; May.

Shrub very much branched, stiff; *leaves* glaucous above; *ament* solitary, ovate, male yellow; *arcesthides* globular, dark purplish-glaucous.—*Arcesthides* diuretic, used to flavour spirituous liquors; *wood* burned as antipestilential; *charcoal* covered with ashes retains fire long.

2. *Juniperus Alpina.* *Alpine juniper.*

Leaves by threes, broad, mucronate, as long as the arcesthides; *arcesthides* elliptical.

Juniperus Alpina, *Raii Syn.* 444, 2; *Park.* 1028.
Juniperus Alpina minor, *Ger. em.* 1372, 3.
Juniperus communis β, *Smith Fl. Br.* 3, 1086.
Savine.

Alpine rocks; shrubby; May.

Stem low, lying down, very tough.

Fam. III. 3. TAXIDEÆ.

Flowers unisexual; *flower-buds* of many imbricated scales, 1 or 2-flowered.—MALE. *Androphore* cylindrical; *anthers* many, sessile; 1 or many-celled.—FEMALE. *Ovary* 1 or 2; *style* upright or none; *stigmata* glandular, on the tip of the ovary; *nucule* 1-celled, on the enlarged and soldered scales; *kernel* reversed, pendent; *perisperm* fleshy; *corculum* central, straight; *cotyledons* 2, obtuse; *radicle* above.

I. 5. TAXUS. *Yew.*

Dioicous, *scales* of the ament imbricate, round, concave. —MALE. *Androphore* cylindrical; *anthers* 8 to 10, peltate, 6 or 8-celled, cells opening below.—FEMALE. *Ovary* 1; *stigma* simple, sessile; *utriculus* ovate, hard, on a fleshy receptacle.—*Trees* or shrubs; *branches* many, alternate; *leaves* linear, alternate; *flower-buds* alternate, axillary.

Taxus baccata. *Berry-bearing yew.*

Leaves 2-rowed, close together; *receptacle* globose.

Taxus, *Raii Syn.* 445, 1; *Ger. em.* 1370; *Park.* 1412.
Taxus baccata, *Lin. S. P.* 1472.
Yew-tree. Yeugh.

Mountainous woods and hedges.

Stem erect; *branches* horizontal, 2-rowed; *leaves* very dark green, smooth, narrow, unarmed; *receptacle* light red.

Fam. IV. 4. SALICINÆ. Mirbell.

Flowers unisexual, amentaceous; *scales* imbricate, one-flowered; *perigonium* free, scalelike or tubular.—MALE. *Stamens* 1 to 30; *anthers* 2-celled.—FEMALE. *Ovary* free; *style* 1, simple; *stigmata* 2 to 4; *capsule* 1 or 2-celled, 2-valved, many-seeded; *seeds* comose; *spermodermis* membranaceous; *perisperm* 0; *corculum* straight. — *Trees* or shrubs; *leaves* alternate, deciduous, when young having 2 stipules at their base.

Stamens 2 to 5; *capsule* 1-celled;
leaves ovate or lanceolate ..... SALIX. 6.
Stamens 8 to 30; *capsule* 2-celled;
leaves angular, peduncle compressed ..... POPULUS. 7.

I. 6. SALIX. Pliny. *Willow.*

Dioicous, rarely monoicous; *ament* ovate or cylindrical; *scales* imbricate, lanceolate; *perigonium* scalelike.—MALE. *Stamens* 2 or 3, rarely 1 or 5.—FEMALE. *Ovary* round, pointed, spiked; *style* 2-cut; *stigmata* 2; *capsule* (follicule?) 1-celled; *seed* upright, comose; *radicle* below.

The willows are here arranged first by their ovaries, whether sessile or pedicelled; then by their styles, whether short or long: to which succeed those whose female aments have not yet been found. A mode of division proposed by Dr. Hull.

a. *Ovary sessile; style short.*

1. *Salix purpurea.* *Purple willow.*

Stamens monadelphous; *leaves* obovate lanceolate, serrated, smooth; *stem* decumbent; *stigmata* ovate, nearly sessile.

Salix purpurea, *Lin. S. P.* 1444.
Salix monandra, *Ard. Mem.* 1, 67.

Near rivers; shrubby; March.

Branches very tough, purple; *leaves* glaucous below, very bitter; *petioles* short: *ament* very slender; *ovary* silky.

2. *Salix glauca.* *Glaucous willow.*

Stamens distinct; *leaves* scarcely notched, elliptical, lanceolate, nearly smooth above, whitish and woolly beneath; *petiole* decurrent; *stipule* convex rounded.

Salix glauca, *Lin. S. P.* 1446.

Alpine mountains; shrub; May.

Shrub 4 feet high; *leaves* particularly white, narrower and less veiny than those of salix arenaria.

3. *Salix carinata.* *Keeled willow.*

Stamens distinct; *leaves* ovate, denticulate, smooth, compressed, keeled, minutely veined; *capsules* ovate, tomentose.

Salix carinata, *Smith Fl. Br.* 1055.
Folded-leaf willow.

Alps of Scotland; shrub; April.

Shrub 4 foot, upright; *secondary branches* downy, stiff; *leaves* arcuato-recurved; above shining, green; beneath pale, opake, scarcely glaucous; *ament* small, ovate; *ovary* twice as long as the scales; *stigmata* become nicked.

4. *Salix Lambertiana.* *Lambert willow.*

Stamens monodelphious; *trunk* upright; *leaves* obovate, lanceolate, acute, serrate, bald; *stigmata* very short, ovate, nicked.

Salix Lambertiana, *Smith Fl. Brit.* 1041.
Boyton willow.

Holts and marshes; tree; March and April.

Tree slender, 10 feet high; *branches* glaucous, purple; *leaves* an inch long, glaucous beneath; *ament* slender; *scales* black, orbicular; *ovary* thick, silky.—Excellent for basket-work.

5. *Salix pentandra.* *Five-stamened willow.*

Stamens 4 to 7; *leaves* elliptical, lanceolate, crenulate, bald; *ovary* bald, shining, nearly sessile.

Salix folio laureo seu lato glabro odorato, *Raii Syn.* 449, 12.
Salix pentandra, *Lin. S. P.* 1442.
Sweet willow. Bay-leaved willow.

Sides of rivulets; tree; May and June.

Tree small; *branches* shining; *leaves* elliptical, lanceolate, or broad-ovate, crenulate; crenules glandular, resinous, light green, shining; *ament* terminal, solitary, blunt, odorous, *scales* round, hairy at bottom; *ovary* lanceolate.

6. *Salix vitellina.* *Yellow willow.*

Stamens 2 or 3; *leaves* lanceolate, acute, bald above, rather silky below, serrated, serratures cartilaginous; *stipules* small, deciduous, bald on the inside; *stigmata* nicked.

Salix folio longo subluteo, non auriculata, viminibus luteis; eademque viminibus rubris, *Raii Syn.* 450, 22.
Salix folio utrinque glauco, viminibus rubris, *Raii Cant.* 142.
Salix vitellina, *Lin. S. P.* 1442.
Yellow willow. Golden osier.

Low pastures and holts; tree; May.

Tree middle size; *branches* erect, yellow, shining; *leaves* nearly sessile, shining above; young leaves shining on both sides; *ament* cylindrical, coetaneous with the vernation; *ovary* bald.

7. *Salix fragilis.* *Crack willow.*

Stamens 2 to 5; *leaves* ovate, lanceolate, pointed, serrated, bald on both sides, shining above; *petioles* toothed, glandular; *ovary* ovate, nearly sessile.

Salix, folio longo latoque splendente, fragilis, *Raii Syn.* 448.
Salix fragilis, *Lin. S. P.* 1443.
Salix decipiens, *Hoffm. Sal.* 2, 9.
Common willow.

Osier-grounds and hedges; tree; April and May.

Tree tall; *branches* crooked, very brittle at bottom; *stipules* rounded, toothed, often none; *male ament* loose.

8. *Salix prunifolia.* *Plum-leaved willow.*

Stamens 2; *leaves* ovate, serrate, bald, smooth above, glaucous below; *secondary branches* rather pubescent; *capsules* ovate, silky.

Salix myrsinites, *Lightf. Scot.* 599.
Salix prunifolia, *Smith Fl. Brit.* 1054.

Alpine mountains; shrubby; May and June.

Stem 3 feet high; *branches* many, spreading, reddish; *leaves* petiolate; above dark green, smooth, shining; beneath veined, opake; *stipules* half-ovate, toothed; *ament* solitary, upright.

9. *Salix vaccinifolia.* *Bilberry-leaved willow.*

Stamens 2; *leaves* ovate, serrated; above bald, smooth; beneath silky, glaucous; *capsules* ovate, silky; *stem* decurrent.

Salix vaccinifolia, *Engl. Bot.* 33, 2341.

South of Scotland.

Tree low, partly procumbent, small; *branches* slender; *leaves* narrower and more silky beneath than those of salix prunifolia; *aments* thick.

10. *Salix venulosa.* *Veiny willow.*

Stamens 2; *leaves* ovate, serrated, bald, reticulately veined above, rather glaucous beneath; *capsules* elliptical, silky.

Salix venulosa, *Smith Fl. Br.* 1055.
Salix formosa, *Willd. S. P.* 4, 680.

Alpine mountains; shrub; May and June.

Branches many, spreading; *leaves* light green beneath, neatly veined above; *veins* prominent, parallel, reticulate, anastomosing near the edge.

11. *Salix herbacea.* *Herb willow.*

Leaves orbicular, serrate, quite bald, reticulately veined, both faces shining; *capsule* bald.

Salix Alpina, alni rotundo folio, repens, *Dillen in Raii Syn.* 448, 7.
Salix herbacea, *Lin. S. P.* 1445.

High micaceous mountains; shrub; June and July.

Root creeping far, woody, much branched; *stem* 1 in. high, woody, slightly branched; *leaves* stiff, light green on both faces; *ament* single, terminal, few-flowered.

12. *Salix reticulata.* *Wrinkled willow.*

Leaves elliptical, orbicular, obtuse, not in the least notched, bald, reticulately veined, green above, glaucous beneath; *capsule* villose.

Salix pumila, folio rotundo, *Raii Syn.* 449, 13.
Salix reticulata, *Lin. S. P.* 1446.

Alpine mountains; shrub; June.

Stem short, much branched, diffuse; *second branches* reddish, leafy; *leaves* stiff, green above, veins red; *petioles* long, red; *aments* single, terminal, short, dense, with a long peduncle.

13. *Salix alba.* *White willow.*

Stamens 2; *leaves* elliptical, lanceolate, acute, serrate, silky on both sides, lower serratures glandular; *stigmata* 2-parted.

Salix, *Raii Syn.* 447, 1; *Ger. em.* 1389.
Salix folio utrinque glauco, viminibus albidioribus, *Raii Cant.* 142.
Salix arborea angustifolia, alba vulgaris, *Park.* 1430.
Salix alba, *Lin. S. P.* 1449.

Woods and damp fields; tree; April and May.

Bark green; *branches* many, spreading; *leaves* acutely and regularly serrulated; *ament* terminal, long, very slender, many-flowered; *capsules* ovate, rather bald.

14. *Salix cærulea.* *Blue willow.*

Stamens 2; *leaves* lanceolate, pointed, serrate, silky beneath, growing smooth, lowest serratures glandular; *stigmata* 2-parted.

Salix alba, var. *Smith Fl. Brit.* 1072.
Salix cærulea, *Engl. Bot.* 2431.

Damp fields; tree; May.

Plant growing quick; *leaves* large, blueish.

b. *Ovary sessile; style long.*

15. *Salix viminalis.* *Basket willow.*

Leaves lanceolate, linear, very long, pointed, not in the least notched; above green, bald; beneath silvery, silky; *branches* rodlike; *style* long.

Eleagnus, *Dalechamp Hist. Lugd.* 278.
Salix folio longissimo, *Raii Syn. Pl.* 450, 21.
Salix viminalis, *Lin. S. P.* 1448.
Osier.

Holts and boggy places; shrub; April and May.

Branches very long, silky; *leaves* spread, 7 to 9 in. long; waved; ribs parallel; *stipules* linear, lanceolate, often none; *aments* cylindrical, early, very hairy; *capsules* ovate, silky.

16. *Salix rosea.* *Rose willow.*

Stamens monadelphous; *trunk* upright; *leaves* lanceolate, pointed, serrate, bald, beneath rather glaucous; *style* long, filiform; *stigmata* linear.

Salix humilior foliis angustis subcæruleus, ex adverso binis, *Raii Syn.* 448, 11.
Salix Helix, *Lin. S. P.* 1444.
Salix monandra, *Hoffm. Sal.* 1, 18.

Holts and boggy places; tree; March and April.

Tree slender, 10 feet high; *branches* tenacious, grey and purple, shining; *leaves* petiolate, bitter; *ament* long, thick, *ovary* silky; *capsules* woolly, white.

17. *Salix Forbyana.* *Forby willow.*

Stamens monadelphous; *branches* upright; *leaves* rather stipuled, lanceolate, toothed, bald, above dark green, beneath glaucous; *stigmata* linear.

Salix fissa, *T. L. S.* 6, 115.
Salix Forbyana, *Smith Fl. Br.* 1041.
Basket osier.

Holts; shrub; April.

Branches upright, flexible, tough, bald, yellow or purple; *leaves* petiolate, 2 or 3 in. long; *stipule* lanceolate; *peduncle* of the ament short, scales black; *ovary* ovate, silky.—Used for basket-work.

18. *Salix rubra.* *Red willow.*

Stamens monadelphous; *leaves* linear, lanceolate, long, acute, toothed, bald, both sides light green.

Salix minime fragilis, foliis longissimis utrinque viridibus, non serratis, *Raii Syn.* 449, 14.
Salix rubra, *Huds. Fl. Angl.* 428.
Salix virescens, *Villars Dauph.* 3, 783.
Salix fissa, *Ehrard Arb.* 29.

Osier grounds; shrub; April and May.

Branches very long, tough, grey, or purplish; *leaves* 4 in. long, slender; *stipules* linear, lanceolate, or none.

19. *Salix tenuifolia.* *Thin-leaf willow.*

Stamens distinct; *leaves* elliptical, acute, serrate, rather bald, glaucous beneath; *stipules* indistinct; *capsules* entirely bald.

Salix tenuifolia, *Lin. Fl. Lapp. ed.* 2, 292.
Salix Pontederæ, *Villars Dauph.* 3, 766.

Rocky sides of rivers; shrub; May and June.

Shrub 2 feet high; *branches* many, spread, while young pubescent; *leaves* an inch and half long, light green above, veins reticulate; *stipules* falcate and serrate, or none; *capsule* bald.

20. *Salix myrsinites.* *Whortle-leaf willow.*

Stamens distinct; *small branches* hirsute; *leaves* elliptical, serrate, bald, shining, veined on both sides; *capsules* awlshape, pubescent.

Salix myrsinites, *Lin. S. P.* 1445.
Salix retusa, *Dickson T. L. S.* 2, 288.

Scotch alps; shrub; May and June.

Shrub 2 feet high; *branches* many, divaricating; *leaves* 3-4ths of an inch long, stiff, both sides light green, while young rather silky; *stipules* serrate, bald; *ament* terminal, erect.

21. *Salix arenaria.* *Sand willow.*

Stamens distinct; *leaves* scarcely nicked, ovate, acute, above rather villous; beneath densely woolly.

Salix arenaria, *Lin. S. P.* 1447.
Salix Lapponum, *Lightf. Scot.* 604.
Salix Helvetica, *Villars Dauph.* 3, 783.

Scotch alps; shrub; June.

Stem 5 feet high, branchy; *leaves* sometimes rather serrate, blackish green above, white beneath; *ament* short, villous; *capsule* woolly.

22. *Salix Stuartiana.* *Stuart willow.*

Stamens distinct; *leaves* scarcely nicked, lanceolate, pointed, hairy above, densely silky beneath; *stigmata* two-parted, capillary.

Salix Stuartiana, *Eng. Bot.* 36, 2586.
Salix arenaria, mas. *Smith Fl. Brit.* 1059.

Scotch alps; shrub; June.

Stem 3 feet high; *branches* dark brown; *leaves* small; *flower-buds* large; *aments* ovate; *floral leaves* large.

23. *Salix cinerea.* *Grey willow.*

Stamens distinct; *leaves* scarcely nicked, obovate, lanceolate; above bald, smooth, shining; beneath reticulately veined, glaucous, rather villose; *stipules* heartshape, serrate.

Salix cinerea, *Lin. S. P.* 1449.
Salix daphnoides, *Villars Dauph.* 3, 765.

Woods; tree; May.

Tree 30 feet high; *branches* shining; *leaves* green above, reddish beneath; lower leaves not nicked; upper serrate; *stipules* small; *ament* short, very dense; *capsule* ovato-lanceolate, bald; *style* very long, 4-cut.

24. *Salix cotinifolia.* *Quince-leaf willow.*

Stamens distinct; *leaves* elliptical, orbicular, rather toothed, above slightly pubescent, beneath villous, rectangularly veined.

Salix cotinifolia, *Smith Fl. Br.* 1066.

Mountain coppices; shrubby; April.

Shrub 2 feet high; *branches* spreading, pubescent, leafy; *leaves* stiff, pointed, dark green above, pale beneath; *buds* villous; *ament* short; *capsule* lanceolate, villous.

c. *Ovary pedicelled; style short.*

25. *Salix bicolor.* *Two-coloured willow.*

Leaves elliptical, pointed, denticulato-serrate; above bald, shining; beneath glaucous, veined, rather hairy; *ovary* pedicelled, lanceolate, silky.

Salix bicolor, *Ehrh. Arb.* 118. not of Willden. Berol.
Salix laurina, *Smith T. L. S.* 6, 122.

Woods; shrub; April and May.

Bark brown; *leaves* rather revolute, dark green above, when dry blackish; *ament* scarcely an inch long; *stamens* short; *anther* roundish.

26. *Salix nigricans.* *Blackish willow.*

Leaves elliptical, lanceolate, crenate, bald; beneath glaucous veined; *ovary* pedicelled, lanceolate, pointed, silky.

Salix phylicifolia β, *Lin. S. P.* 1442.
Salix nigricans, *Smith T. L. S.* 6, 120.

Holts; shrub; April.

Bark blackish; *branches* rather straight; *leaves* slightly rounded at bottom, dark green above, when dry black; *stipules*, if present, rather large, oblique heartshape; *ament* an inch and half long, blunt; *stamens* hairlike; *anthers* oblong; *capsule* awlshape.

27. *Salix amygdalina.* *Almond-leaved willow.*

Stamens 3; *leaves* ovate, oblique, serrated, bald; *ovary* pedicelled; *stipules* very large.

Salix folio auriculato splendente flexilis, *Raii Syn.* 448, 9.
Salix amygdalina, *Lin. S. P.* 1443.

Holts and bogs; shrub; April, May.

Bark deciduous; *branches* bald, brittle; *leaves* rounded at the base, oblique; above light green; beneath glaucous; *stipules* rounded; *aments* coetaneous, thick, dense; *scales* bald; *capsules* quite bald.

28. *Salix decipiens.* *Deceiving willow.*

Leaves lanceolate, serrate, quite bald; *petiole* rather glandular; *ovary* attenuated, pedicelled; *branches* bald, highly polished.

Salix decipiens, *Eng. Bot.* 1937.

Woods and hedges; tree; April.

Bark varnished; *twigs* reddish; *floral leaves* obtuse, dilated, obovate, recurved; *ovary* bald; *stamens* 2, rarely 3.

29. *Salix arbuscula.* *Treelike willow.*

Leaves lanceolate, obsoletely toothed, bald; *stipules* 0; *small branches* pubescent; *aments* ovate.

Salix arbuscula, *Lin. Fl. Lapp. ed.* 2, 297.
Salix arbuscula γ. *Lin. S. P.* 1445.

Scotch alps; small tree; April.

Stem 1 foot high, slender; *branches* spreading, thread-shape, while young pubescent; *leaves* sharp at both ends; *ament* short, erect.

30. *Salix aurita.* *Eared willow.*

Leaves somewhat serrate, obovate, blunt, with a deflected point, villous on both sides, reticulately veined; *stipules* variously formed.

Salix folio rotundo minore, *Raii Syn.* 450, 17.
Salix caprea rotundifolia, *Ger. em.* 1390.
Salix aurita, *Lin. S. P.* 1446.
Salix caprea δ, *Huds. Fl. Angl.* 430.

Mountainous woods; shrub; April and May.

Branches many, horizontal, entangled; *leaves* crisped or waved, above greyish, soft, pubescent; beneath, villous; *stipule* persisting; *aments* very short; *capsule* awlshape, villous.

β. *pumila.* *Leaves* roundish, hoary beneath.

Salix caprea pumila, folio subrotundo subtus incano, *Raii Syn.* 450, 18.
Salix caprea ε, *Huds. Fl. Angl.* 430.

31. *Salix aquatica.* *Water willow.*

Leaves rather serrate, obovate, elliptical, pubescent, flat, beneath rather glaucous; *stipules* rounded, toothed.

Salix folio ex rotunditate acuminato, *Raii Syn.* 449, 16.
Salix caprea α, *Huds. Fl. Angl.* 429.
Salix aurita, *Hoff. Sal.* 5.
Salix cinerea, *With Bot. Arr.* 54.

Woods and damp hedges; tree; April.

Tree upright; *leaves* scarcely wrinkled, soft, greyish, becoming bald above, venulose beneath and rather hairy; *buds* woolly; *capsule* awlshape, villous.

32. *Salix sphacelata.* *Withered-leaf willow.*

Leaves not notched, elliptical, flat, pubescent on both sides, rather withered at the tip; *stipules* very small; *capsule* awlshape, villous.

Salix lanata, *Lightf. Scot.* 602.
Salix caprea, var. *Hoffm. Sal.* 1, 28.

Alpine valleys; shrub; April and May.

Branches spreading; *leaves* flat, very rarely and slightly crenate, tips brownish; *capsules* narrowed at the end, becoming rather naked.

33. *Salix caprea.* *Sallow willow.*

Leaves ovate, pointed, serrate, waved; above smooth, bald; beneath tomentose; *stipule* rather lunate; *capsules* ventricose, villous.

Salix latifolia rotunda, *Raii Syn.* 449, 15.
Salix folio subrotundo auriculata, *Raii Cant.* 145, 2.
Salix caprea α, *Lin. S. P.* 1448.
Salix caprea γ, *Huds. Fl. Angl.* 429.

Woods and hedges; tree; April.

Branches shining; *small branches* pubescent; *leaves* variously shaped, waved, veined beneath; *stipules* recurved; *ament* early, ovate; *capsule* ovate, villose.

34. *Salix mollissima.* *Velvet willow.*

Leaves lanceolate, pointed, subcrenated; beneath silky, woolly; *stipules* lunate, very small.

Salix mollissima, *Smith Flor. Brit.* 1070; *Ehrh. Arb.* 79?

Holts; shrub; March.

Branches erect, very tough, rather bald; *leaves* above green, smooth, quite bald; *petiole* attenuated; *aments* ovate, small; *ovary* shortly pedicelled; *syle* short; *stigmata* linear, very deeply divided.

35. *Salix acuminata.* *Pointed willow.*

Leaves lanceolate, oblong, pointed, waved and slightly toothed; above smooth, rather bald; beneath tomentose; *stipules* kidneyshape; *capsule* ovate, narrowed, pubescent.

Salix caprea acuto longoque folio, *Raii Syn.* 450, 19.
Salix caprea latifolia, *Ger. em.* 1390, 4.
Salix caprea, var. *Lightf. Fl. Scot.* 608.
Salix acuminata, *Mill. Dict.* 8, 14.

Woods and hedges; tree; April.

Branches rather smooth; *leaves* above light green; mainrib beneath reddish; *stipules* toothed; *aments* early, ovate, cylindrical; *style* rarely 2-cut.

36. *Salix stipularis.* *Large-stipuled willow.*

Leaves lanceolate, pointed, slightly crenate, above bald, beneath tomentose, *stipules* nearly heartshape, very large; *perigonium* cylindrical, long.

Salix stipularis, *Engl. Bot.* 1214.

Holts; shrub; March.

Branches erect, woolly; *leaves* long, unequally and slightly crenate; *stipules* with a short petiole.

37. *Salix triandra.* *Three-stamened willow.*

Stamens 3; *leaves* lanceolate, serrate, narrowed at both ends, bald; *ovary* pedicelled, quite bald.

Salix folio amygdalino, utrinque aurito, corticem abjiciens, *Raii Syn.*
Salix triandra, *Lin. S. P.* 1442.

Holts and sides of rivers; tree; May to August.

Bark deciduous; *small branches* upright; *leaves* 3 in. long; serratures rounded, slightly glandular; above light green; beneath rather glaucous; *stipules* ovate, oblique, sometimes none; *aments* terminal, slender; *stamens* rarely 2; *capsule* ovate, pointed.—*Bark* febrifuge.

38. *Salix petiolaris.* *Long-leaf-stalk willow.*

Leaves lanceolate, serrate, bald, glaucous beneath; *ovaries* pedicelled, ovate, silky; *stigmata* sessile, 2-lobed.

Salix petiolaris, *Smith T. L. S.* 6, 122.

Holts and bogs; shrub; April.

Branches slender, lax, brownish; *leaves* patulous; above light green, quite bald, shining; beneath glaucous; *petioles* long; *stipules* lunate, small; *aments* short.

39. *Salix Dicksoniana.* *Dickson willow.*

Leaves elliptical, pointed; slightly toothed, bald on both sides, glaucous beneath; *small branches* quite bald; *aments* ovate, very short.

Salix myrtilloides, *Smith Fl. Bor.* 1056.
Salix Dicksoniana, *Engl. Bot.* 1390.

Scotch alps; shrub; April.

Stem a foot high, upright, branchy; *leaves* flat, smooth, teeth glandular at the tip, above light green, beneath very finely veined; *petioles* short; *ovary* ovate; *stigmata* thick.

40. *Salix argentea.* *Silver willow.*

Leaves not cut, elliptical, somewhat revolute with a reflected point; above villous; beneath silky, shining; *small branches* silky, silvery.

Salix pumila, foliis utrinque candicantibus et lanuginosis, *Dillen in Raii Syn.* 447, 3.
Salix repens γ, *Huds. Fl. Angl.* 429.
Salix arenaria, *Lightf. Fl. Scot.* 604.
Salix fusca, *With. Bot. Arr.* 51.

Sandy sea-shores; shrub; May.

Stem diffuse or prostrate; *leaves* an inch long, shining; *stipules* very small; *aments* early, cylindrical, blunt; *capsules* ovate, lanceolate, silky.

41. *Salix prostrata.* *Prostrate willow.*

Leaves rather toothed, elliptical, pointed; beneath glaucous, silky; *stem* prostrate; *petiole* short, thick.

Salix prostrata, *Smith Flor. Brit.* 1060.
Salix polymorpha, *Ehrh. Arb.* 490.

Moist mountains; small shrub; June, July.

Branches long, slender; *leaves* scarcely revolute; above dark green, slightly veined, rather pubescent; *ovary* ovate, silky; *pedicell* very short; *style* short, thick; *stigmata* cloven.

42. *Salix fusca.* *Brown willow.*

Leaves rather denticulated, elliptical, oblong, pointed; above bald; beneath glaucous, silky; *petiole* attenuated; *stem* erect, spreading.

Salix fusca, *Lin. S. P.* 1447.

Moist heaths and mountains; small shrub; May.

Small branches rather straight, pubescent; *leaves* glandular on the edge; above brownish green; *stipules* lanceolate, awlshape; *capsules* awlshape, silky; *stigmata* 2-parted.

43. *Salix parvifolia.* *Small-leaved willow.*

Leaves elliptical, scarcely cut, hooked; beneath glaucous, silky; *stem* decumbent; *stipules* ovate, not in the least notched.

Salix parvifolia, *Eng. Bot.* 1961.

Damp fields; small shrub; April, May.

Fœtid; branches many, entangled, wandlike, 18 in. long; *leaves* about half an inch long; *female ament* ovate, dense; *ovary* pedicelled, silky; *style* short, thick; *stigmata* thick, obtuse, deeply divided.

44. *Salix adscendens.* *Ascending willow.*

Leaves elliptical, oblong, somewhat serrated, hooked; beneath glaucous, silky; *stem* ascending; *stipules* ovate, serrated.

Salix adscendens, *Eng. Bot.* 1962.

Moist places; shrub; May.

Shrub fœtid, low creeping, twice as large as salix parvifolia; *branches* long, straight, obliquely ascending; *leaves* oblong, slightly silvery; *female ament* ovate; *ovary* silky.

45. *Salix repens.* *Creeping willow.*

Leaves not in the least notched, elliptical, lanceolate, rather mucronulate; above rather naked; beneath glaucous, silky; *stem* depressed.

Salix pumila angustifolia prona parte cinerea, *Raii Syn.* 447, 5.
Chamæitea sive Salix pumila, *Ger. em.* 1391, 7.
Salix repens, *Lin. S. P.* 1447.
Salix depressa, *Hoffm. Sal.* 1, 63.

Sandy heaths; small shrub; May.

Stem creeping, rooting, very branchy; *branches* entangled; *leaves* rather revolute, above bald; *stipule* none; *aments* many, lateral; *capsules* pedicelled, lanceolate, pubescent; *stigmata* 2-parted.

β. *lanuginosa.* *Leaves* narrow; beneath downy.

Salix pumila angustifolia inferne lanuginosa, *Raii Syn.* 447.
Salix humilis repens, *Ger. em.* 1391, 8.

γ. *rotundifolia.* *Leaves* rounded below, ash-coloured.

Salix alpina pumila, rotundifolia repens inferne sub cinerea, *Raii Syn.* 448, 6.
Salix humilis, *Ger. em.* 1391, 6.

46. *Salix rupestris.* *Rock willow.*

Leaves obovate, serrated, smooth; both sides silky; *stipules* pilose; *ovary* pedicelled, silky; *stigmata* undivided.

Salix rupestris, *Eng. Bot.* 2342.

Scotch alps; small shrub; April.

Stem trailing, decumbent; *branches* slender, pubescent; *leaves* an inch long, even, flat; *stipule* ovate; *ovary* ovate; *style* prominent; *stigmata* ovate, entire or scarcely notched.

47. *Salix Andersoniana.* *Anderson willow.*

Leaves elliptical, pointed, crenulated, pubescent; *stipules* half-ovate, rather bald; *ovary* bald; *stigmata* 2-cut.

Salix Andersonia, *Eng. Bot.* 2343.

Scotch mountains; shrub; May.

Taller than salix rupestris; *branches* short, pubescent; *leaves* light green, paler beneath; *stipules* small; *ament* ovate; *ovary* taper, pointed, quite bald; *style* shortish; *stigmata* deeply cloven.

48. *Salix Forsteriana.* *Forster willow.*

Leaves elliptical, obovate, pointed, crenate, rather pubescent, beneath glaucous; *stipules* arched; *ovary* silky.

Salix Forsteriana, *Eng. Bot.* 2344.

Woods of Scotland; tree; May.

Branches pubescent; *leaves* 3 inches long, dull green; *stipules* vaulted, toothed; *ovary* ovate, taper, pointed, silky; *style* short; *stigmata* entire.

d. *Ovary pedicelled; style long.*

49. *Salix lanceolata.* *Lance-leaved willow.*

Stamens 3; *leaves* lanceolate, serrated at both ends, attenuated, bald; *petiole* decurrent; *ovary* pedicelled.

Salix lanceolata, *Engl. Bot.* 1436.

Woods and bogs; small tree; April, May.

Bark deciduous; *leaves* 3 inches long, often with a small pair of leaflets at the base; *stipules* pointed.

50. *Salix Russelliana.* *Russel willow.*

Leaves lanceolate, pointed, serrated, bald; *ovary* pedicelled, subulate, smooth.

Salix Russelliana, *Smith Flor. Brit.* 1045.
Leicestershire, Dishley or Gorgomel willow. Bedford willow.

Bogs and holts; tree; April and May.

Branches shining, very tough, flexible; *leaves* long, bald, shining, beneath glaucous; *stipules* half cordate, toothed; *aments* lax; *stigmata* parted.

51. *Salix phylicifolia.* *Tealeaf willow.*

Leaves lanceolate, waved, crenate, bald, beneath glaucous; *stipules* rather lunate; *ovary* pedicelled, silky.

Salix phylicifolia α, *Lin. S. P.* 1442.
Salix phylicifolia, *Smith T. L. S.* 6, 123.
Salix radicans, *Smith Fl. Brit.* 1053.

Scotch alps; small tree; May.

Branches smooth, rooting, spread; *leaves* not cut at top or bottom, unequally and broadly crenated in the middle; above dark green; beneath glaucous, reticulately veined; *petiole* attenuated; *stipules* lunate; *ament* early; *style* long; *stigmata* 2-cut.

52. *Salix malifolia.* *Appleleaf willow.*

Leaves elliptical, oblong, toothed, repand, scariose, quite bald; *stipules* heartshape, very large.

Salix malifolia, *Smith Fl. Brit.* 1053.

Mountains? shrub.

Stem 3 feet high; *branches* upright, blackish, tortuous, hairy; *leaves* 2 in. long, scariose, above light green, beneath rather glaucous, veined; veins divaricating, anastomosing; *petiole* very broad at bottom.

53. *Salix rosmarinifolia.* *Rosemaryleaf willow.*

Leaves not in the least cut, linear, lanceolate, stiff, straight, beneath silky; *stem* erect; *stipules* upright, flat; *aments* recurved.

Salix pumila rhamni secundi Clusii folio, *Dillen in Raii Syn.* 447, 2.
Salix rosmarinifolia, *Lin. S. P.* 1448.

Damp sandy places; shrub.

Stem 3 feet high; *branches* many, straight; *leaves* upright, an inch long, edge glandular, above pubescent; *stipules* lanceolate; *aments* early, short, drooping; *ovary* pedicelled, ovate, lanceolate; *style* long; *stigmata* dark purple.

e. *Female plants not discovered.*

54. *Salix Croweana.* *Crowe willow.*

Stamens soldered; *leaves* elliptical, somewhat serrate, beneath glaucous.

Salix Croweana, *Smith T. L. S.* 117.

Bogs; small tree; April and May.

Branches short, spreading, rather brittle, shining; *leaves* spreading, elliptical, both sides quite bald; above light green, shining; beneath glaucous, veiny; *aments* short.

55. *Salix oleifolia.* *Oliveleaf willow.*

Leaves elliptical, heartshape, pointed, crenulate, both sides pubescent; *stipules* nearly heartshape, toothed, rather bald; *branches* hairy.

Salix oleifolia, *Smith Fl. Brit.* 1065.

Coppices; small tree; March.

Tree 10 feet high; branches spread, loose, finely pubescent; *leaves* stiff, flat; above light green, finely pubescent; beneath ferruginous; *petioles* thick, above pubescent; *stipules* rounded; *buds* woolly.

56. *Salix hirta.* *Rough willow.*

Leaves elliptical, cordate, pointed, crenulate, both sides pubescent; *stipules* nearly heartshape, toothed, rather bald; *branches* hairy.

Salix hirta. *Engl. Bot.* 20, 1404.

Heaths; small tree; April and May.

Branches thick, very hairy; *leaves* pale beneath; *petioles* long, very hairy; *male ament* cylindrical, rather slender.

II. 7. POPULUS. Pliny. *Poplar.*

Flowers dioicous; *ament* scaly; *scales* oblong, loose, imbricate; *edges* torn; *perigonium* tubular, obliquely truncated, on the base of the scale: — MALE, *Stamens* 8 to 20: — FEMALE, *Ovary* 1, ovate, pointed, inverted; *ovules* many; *stigmata* 4, sessile; *capsule* 2-celled, 2-valved; *seeds* comose, radicle above.

a. *Turions tomentose or hairy; stamens* 8. Populus.

1. *Populus alba.* *White poplar.*

Leaves heartshape, roundish, lobed, toothed; beneath tomentose, snow-white; *ament* ovate, oblong.

Populus alba, *Raii Syn.* 446, 2; *Ger. em.* 1486.
Populus alba nivea, *Aiton Hort. Kew.* 3, 403.
Populus major, *Miller Dict. ed.* 8, 4.
Populus nivea, *Willd. Baumz.* 227.
Abele.

Damp woods; tree; March.

Branches horizontal; *leaves* above, black green, beneath very densely woolly; *petiole* one-third as long as the leaf; *stipules* lanceolate, obsoletely toothed; *ament* an inch long.

2. *Populus canescens.* *Grey poplar.*

Leaves roundish, angularly repand, toothed; beneath tomentose, hairy; *ament* cylindrical, long, loose.

Populus alba foliis minoribus, *Raii Syn.* 446, 2*; *Ger. em.* 1487
Populus alba, *Mill. Dict. ed.* 8, 1.
Populus alba canescens, *Aiton Hort. Kew.* 3, 405.
Populus nigra, *Mill. Illustr.* 90.
Populus canescens, *Smith Fl. Brit.* 3, 1080.

River-sides; tree; March.

Roots widely creeping; *branches* ascending; *leaves* above light green, bald; beneath tomentose, woolly, greyish; sometimes rather smooth; *stipules* linear, falcate, toothed; *ament* 2 in. long.

3. *Populus tremula.* *Trembling poplar.*

Leaves nearly orbiculate, toothed, both sides smooth; *ament* oblong.

Populus Lybica, *Raii Syn.* 446, 3; *Ger. em.* 1487.
Populus tremula, *Lin. S. P.* 1464.
Asp. Aspen.

Damp woods; tree; March and April.

Tree tall; *small branches* smooth; *turions* hairy; *leaves* tremulous; *stipules* bristlelike; *aments* 2 in. long, hairy.

b. *Turions smooth, bald; stamens* 12 *to* 16. Ægirus.

4. *Populus nigra.* *Black poplar.*
Leaves deltoid, pointed, serrate, both sides smooth; *petiole* short; *branches* patulous.

Populus nigra, *Raii Syn.* 446, 1; *Ger. em.* 1486; *Lin. S. P.* 1464.

Watery places; tree; March.

Tree tall, smooth; *leaves* dark green; *petiole* half as long as the leaves; *aments* smooth.

Fam. V. 5. BETULIDEÆ.

Flowers monoicous, amentaceous.—MALE, *Perigonium* none, or 4-cut; *stamens* 4 or 12, inserted on the scales of the ament; anthers 2-celled.—FEMALE, *Perigonium* 0; *ovary* free, 2-celled; *stigmata* 2 to 4, terminal; *nucula?* 1 or 2-celled, in the scales of a cone; *perisperm* 0; *corculum* straight, flat; *radicle* above.—Tree or shrub; *leaves* alternate, annual, when young having 2 stipules at the base.

Stamens 12; *nucula?* edged ..... BETULA. 8.
Stamens 4; *nucula?* ovate, naked..... ALNUS. 9.

I. 8. BETULA. Pliny. *Birch.*

Ament long, cylindrical.—MALE. *Scales* in threes; middle scale stamen-bearing; *perigonium* 0; *stamens* 12.—FEMALE. *Scales* deciduous, 3-lobed at the tip, 2 or 3-flowered at the base; *styles* 2; *ovary* compressed, 2-celled, 1 abortive; *nucula* heartshape, with a membranaceous edge.

1. *Betula alba.* *White birch.*
Leaves deltoid, acute, doubly serrate, smooth; *lateral lobes* of the scales of the cone rounded.

Betula, *Raii Syn.* 443; *Ger. em.* 1478.
Betula alba, *Lin. S. P.* 1393.

Woods and hedges; tree; April and May.

Bark white, epidermis peeling off; *leaves* petiolate, beneath pubescent; *cone* peduncled, drooping; scales cylindrical; *twigs* and *buds* blackish.—Bark used anciently for writing on; leaves applied outwardly and taken internally in dropsy, and other diseases, also used to dye yellow; twigs used for brooms, and for correcting children, on account of their toughness; juice obtained by piercing the tree under a large arm, nearly through to the bark on the

opposite side, is saccharine, lithontripic, and may be fermented either into a wine or beer; wood used for heels of women's shoes, and packing-boxes.

β. *pendula.* *Twigs* pendulous, rough with tubercles; *leaves* small.

γ. *globosa.* *Cones* ovate, or nearly spherical.

2. *Betula nana.* *Dwarf birch.*

Leaves orbicular, crenate, smooth, beneath reticulately veined.

Betula nana, *Lin. S. P.* 1394.

Spongy mountainous heaths; shrub; May.

Stem 3 feet high; *branches* numerous, stiff; *leaves* both sides smooth, 1 to 3 from each bud; *petioles* short; *ament* lateral, upright, blunt.

II. 9. ALNUS. Pliny. *Alder.*

MALE. *Ament* long, cylindrical; *scales* pedicelled, heart-shape, with 3 small scales beneath, flowerbearing at the base; *perigonium* urceolate 4-cut; *stamens* 4. — FEMALE. *Cone* ovate, globose; *pedicell* branched; *scales* imbricate, corky, persistent, 4-lobed at the tip, 2-flowered; *perigonium* 0; *ovary* compressed, 2-celled; *stigmata* 2; *nucula* compressed, ovate, naked, 2-celled, 2-seeded.

Alnus glutinosa. *Glutinous alder.*

Leaves roundish, cuneate, obtuse, rather retuse, glutinous; *axillæ* of the ribs beneath villous.

Alnus, *Raii Syn.* 442, 1.
Alnus nigra, sive Frangula, *Ger. em.* 1469.
Alnus vulgaris, *Park.* 1408.
Betula Alnus α, *Lin. S. P.* 1394.
Betula Alnus, *Huds. Fl. Angl.* 416.
Alnus glutinosa, *Gærtn. Sem. and Fr.* 2, 54.
Black alder. Butchers' prick tree. Owler.

Watery places; tree; March.

Leaves serrate, dark green, shining; ribs pinnate, parallel; beneath pilose at the base; *peduncles* branched, terminal; *aments* pendulous; *cones* upright, scales not falling off.—Inner bark purgative.

Fam. VI. 6. CORYLIDEÆ. *Corylaceæ*, Mirbell. *Cupuliferæ*, Richard.

Flowers unisexual. — MALE amentaceous; *perigonium* simple or 0; *stamens* 5 to 20, on the scales; *anthers* 1 or

2-celled.—Female. *Cupula* 1 or many-flowered; *perigonium* adherent, many-toothed; *ovary* 1, many-celled; *ovules* many; *style* 2 or many-cut; *stigmata* 2 or many; *cupula* containing 1 or many glands; *glans* or *nucula* 1-celled, 1-seeded by abortion of the rest; *kernel* pendent; *perisperm* 0; *corculum* straight, central; *radicle* adverse.—*Stem* ligneous; *leaves* alternate, simple, stipuled, pinnately ribbed.

Cupula open at top.

Nucula angular; *ament-scale* rounded... Carpinus. 10.
Nucula ovate; *ament-scale* 3-lobed ..... Corylus. 11.
Glans ovate; *cupula* cupshape. ..... Quercus. 12.

Cupula closed, or valvular.

Ament globose; *cupula* hairy ..... Fagus. 13.
Ament linear; *cupula* spinous; *flowers* glomerated ..... Castanea. 14.

A. *Cupula* open at top.

I. 10. CARPINUS. Pliny. *Hornbeam.*

Monoicous.—Male. *Ament* long, loose, cylindrical; scales ovate, pointed, concave, ciliated, imbricate; *stamens* 8 to 14; *anthers* bearded at the tip.—Female. *Cupula* 2-leaved, very large, 3-lobed, reticulately veined, 2-flowered; *perigonium* 6-toothed, unequal, persistent; *ovary* 2-celled, compressed; *ovules* 2, one abortive; *style* 2, filiform; *stigmata* 2; *nucula* bony, angular, 1-celled.—*Stem* arborescent; *aments* axillary and terminal; *cupulæ* racemose.

Carpinus ulmoides. *Elmlike hornbeam.*

Leaves of the cupula 3-parted; lobes not cut, lanceolate, middle one long.

Ostrya ulmo similis fructu in umbilicis foliaceis, *Raii Syn.* 451.
Betulus, sive Carpinus, *Ger. em.* 1479.
Ostrys, sive Ostrya, *Park.* 1406.
Carpinus Betulus, *Lin. S. P.* 1416.
Hornbeam. Hornbeech. Witch-hasel, Essex. *Hardbeam. Yoke elm.*

Woods and hedges; tree; May.

Bark white, smooth; *leaves* ovate, doubly serrate, petioled; *ament* lateral, scales brown; *cupula* terminal; *nucula* ribbed.—Inner bark dyes yellow; wood white, very tough, grows very hard like horn, used in millwork, burns like a candle.

II. 11. CORYLUS. Pliny. *Hasel.*

Monoicous.—Male. *Ament* cylindrical; *scales* imbricate, hairy, 3-lobed, middle lobe broader, covering the narrow side ones; *stamens* 6 or 8, very short.—Female. *Flowers* many, in the scales of the bud, becoming peduncled; *cupula* 1-leafed, 1-flowered, fleshy below, above turgid, 2-lipped, torn; *perigonium* scarcely visible; *ovary* 2-celled? *styles* 2; *ovules* 2; *nucula* ovate, smooth, involucrated at the base, 1-celled, 1-seeded.—*Stem* shrubby; *ament* terminal; *fruit-buds* axillary.

1. *Corylus sylvestris.* *Wild Hasel.*

Stipules oblong, ovate; *cupula* bellshape, tip patulous, torn, toothed; *leaves* ovate, heartshape, pointed.

Corylus sylvestris, *Raii Syn.* 439; *Ger. em.* 1439, 2.
Corylus, seu Nux avellana sylvestris, *Park.* 1416.
Corylus avellana, *Lin. S. P.* 1417.
Hasel nut.

Woods and hedges; shrubby; March and April.

Leaves expanding after the flowers; *petioles* short; *aments* pendulous; *fruit-buds* ovate; *styles* blood-red, projecting. —*Flowers* the first of our trees, considered by country-people to prognosticate the future harvest: root used for inlaying and staining; wood clears turbid wine, used for walking-sticks, fishing-rods, crates, hoops, and for charcoal; nuts eaten, also expressed for oil.

2. *Corylus tubulosa.* *Tubular hasel.*

Stipules oblong, blunt; *cupula* tubular, cylindrical, tip narrower, jagged, toothed; *leaves* rather round, heartshape, pointed.

Nux avellana, sive Corylus, *Ger. em.* 1438, 1; *Park.* 1416.
Corylus avellana β, *Lin. S. P.* 1417.
Corylus tubulosa, *Willd. S. P.*
Filberd.

Cultivated for its fruit.

III. 12. QUERCUS. Pliny. *Oak.*

Monoicous.—Male. *Ament* threadshape; *flowers* distant; *perigonium* torn; *stamens* 5 to 10.—Female. *Cupula* one-flowered, scaly; *scales* many, coalescing into a cup; *perigonium* 6-sepaled; sepales very small, pubescent, girding the base of the style; *ovary* 3-celled, 2 cells abortive; *style* short, pyramidical, thickened; *glans* 1-celled, 1-seeded, base included in the cupula.—*Stem* arborescent; *leaves* annual (in exotics perennial).

1. *Quercus longæva.* *Longlived oak.*

Leaves annual, nearly sessile, oblong, broader above, sinuses acute, angles blunt; *fruit* oblong, peduncled.

Quercus latifolia, *Raii Syn.* 440, 1; *Park.* 1385.
Quercus vulgaris, *Ger. em.* 1339, 1.
Quercus Robur, *Lin. S. P.* 1414.
Quercus Robur γ, pedunculata, *Martyn. Fl. Rust.* 10.
Quercus pedunculata, *Willd. Baum.* 278.
Quercus fœmina, *Fl. Dan* 1180.
Quercus racemosa, *Lamarck Encyc. Meth.* 1, 715.
Quercus longæva, *Salisb. Prod.* 392.
Common oak. English oak.

Woods and hedges; arborescent; April.

Tree formal; *leaves* above smooth, shining; beneath pale.

2. *Quercus sessiliflora.* *Squat-flowered oak.*

Leaves annual, petioled, oblong, smooth; sinuses acute, opposite; *fruit* oblong, sessile.

Quercus latifolia mas, quæ brevi pediculo est, *Raii Syn.* 440, 2.
Quercus Robur, *Willd. Baum.* 277.
Quercus Robur γ, sessilis, *Martyn Fl. Rust.* 11.
Quercus sessiliflora, *Smith Fl. Brit.* 1027.
Bay oak.

Woods; arborescent; April and May.

Leaves smooth, more equally and regularly lobed than the former.

3. *Quercus pubescens.* *Downy oak.*

Leaves annual, petioled, oblong, obovate, sinuate, pubescent beneath; lobes obtuse, angular; base rather heart-shape, irregular; *fruit* nearly sessile.

Quercus sessiliflora β, *Smith Fl. Brit.* 1027.
Quercus pubescens, *Willd. S. P.* 4, 450.
Durmast oak, Martyn Fl. Rust. 12.

Woods; arborescent; April and May.

The wood of all the oaks is hard, tough, tolerably flexible, not easily splintering, and very durable; sawdust used to dye drabs and browns; bark tans leather, is also astringent, and with a little copperas dyes woollen purplish blue; leaves eaten by cows, sheep, and goats; glans, called acorn, *i.e.* oak-corn, fattens swine and deer; balls, called oak-apples, produced by insects, dye with copperas a more beautiful black than nut-galls, but less durable.

B. *Cupula* closed, valvular.

IV. 13. FAGUS. Pliny. *Beech.*

Monoicous.—MALE. *Ament* pendulous, globose, dense; *perigonium* 6-lobed; *stamens* 8.—FEMALE. *Cupula* two-flowered, 4-lobed, outside armed with soft spines; *perigonium* 6-sepaled; sepales tomentose; *style* 1, 3-cut; *stigmata* 3; *ovary* 3-celled; 2 in each cell; *glans* 1-celled, 3-sided, 1 or 2-seeded.

Fagus sylvatica. *Wood beech.*

Leaves ovate, smooth, slightly toothed, edge fringed.

Fagus, *Raii Syn.* 439; *Ger. em.* 1444; *Park.* 1403.
Fagus sylvatica, *Lin. S. P.* 1416.

Woods and hedges; arborescent; April and May.

Bark smooth; *leaves* petioled, ribs few and straight.—Wood brittle, decaying in the air but lasting under water; leaves used for stuffing mattresses; glands, called mast, fatten swine, dried and made into bread, also roasted for coffee, and pressed for their oil.

V. 14. CASTANEA. Theophrastus. *Chestnut.*

Polygamous. — MALE. *Ament* very long, cylindrical; *flowers* glomerate, scattered along the axis; *perigonium* 6-sepaled; *stamens* 5 to 20.—HERMAPHRODITE. *Cupula* 2 or 3-flowered, 4-lobed, armed with hard branchy spines; *perigonium* 5 or 6-sepaled; sepales covered on the inside with stiff hairs; *stamens* 12, red, abortive; *ovary* 6-celled; *ovules* 2 in each cell, 3 to 5 abortive; *styles* 6; *glans* one-celled, mucronate; *seeds* 1 to 3, wrinkled.

Castanea vesca. *Eatable chestnut.*

Leaves oblong, lanceolate, pointed, mucronately serrate, both sides smooth.

Castanea, *Raii Syn.* 440; *Gtr. em.* 1442, 1.
Castanea vulgaris, *Park.* 1400.
Fagus Castanea, *Lin. S. P.* 1416.
Castanea vesca, *Gærtn. Sem. et Fr. Pl.* 37.

Woods; arborescent; May.

Bark with broad cracks; *leaves* bald, annual, ribs parallel; *aments* necklacelike.—Wood durable, but now usually cut young for hop-poles; fruit esculent.

β. *sativa.* *Leaves* larger, more glossy; *styles* 6 to 9.

Spanish chestnut.

Glans 3 times as large as the wild, earlier, and better tasted.

Fam. VII. 7. MYRICÆ. Richard.

Flowers unisexual, amentaceous.—MALE. *Aments* one-flowered; *stamens* 4 to 6; *anthers* 2-celled. — FEMALE. *Ovary* 1, free; *stigmata* 2; *nut* 1-celled; shell bonelike; *kernel* inverse; *perisperm* 0.—*Stem* woody; *leaves* glandular; *ament* axillary; or spiked, terminal; *drupe* resinous, spotted.

I. 15. MYRICA. Theophrastus. *Gaule.*

Dioicous, rarely monoicous; *aments* ovate, scales lunate. —MALE. *Stamens* 4 to 6; *anthers* 4-valved.—FEM. *Ovary* 1; *stigmata* 2; *drupe* 1-celled, 1-seeded.

Myrica Brabantica. *Brabant gaule.*

Leaves lanceolate, rather serrated; *stem* shrubby.

Gale, frutex odoratus Septentrionalium, Elæagnus Cordo, *Raii Syn.* 443.
Myrtus Brabantica, sive Elæagnus Cordi, *Ger. em.* 1414.
Rhus sylvestris, sive Myrtus Brabantica vel Anglica, *Park.* 1451.
Myrica Gale, *Lin. S. P.* 1453.
Gaule. Sweet willow. Dutch myrtle.

Bogs and fens; shrubby; May.

Branches many, upright; *twigs* rather bent; *leaves* nearly sessile; *aments* early, sessile.—Used instead of hops, but unless the wort is boiled a long time, the liquor occasions the head-ach; dyes wool yellow; drives away fleas and moths; yields an oil by distillation with water; powder or infusion vermifuge; tans calf-skins; aments boiled in water throw up a waxy scum.

Fam. VIII. 8. ULMACEÆ.

Flowers hermaphrodite, or unisexual by abortion; *perigonium* simple, free, 4 to 6-toothed; *stamens* 4 or 6, on the perigonium; *ovary* 1; *styles* 2; *stigmata* 2; *samara* one-seeded; *seed* pendent; *perisperm* 0; *embryo* straight; *cotyledons* plaited; *radicle* above.

I. 16. ULMUS. Pliny. *Elm.*

Flowers hermaphrodite; *perigonium* bellshape, 4 or 5-toothed, coloured, not falling off; *stamens* 3 or 6; *ovary* compressed; *stigmata* 2; *samara* suborbiculate, swelled in the middle, 1-seeded.—*Stem* arborescent; *leaves* rough, ribs parallel; *flowers* fascicled, scaly, axillary.

1. *Ulmus campestris.* *Field elm.*

Leaves doubly serrate, rough, unequal at bottom; *flowers* nearly sessile, 4-cut; *samara* oblong, naked.

Ulmus vulgatissima folio lato scabro, *Raii Syn.* 468, 1; *Ger. em.* 1480, 1.
Ulmus vulgaris, *Park.* 1404.
Ulmus campestris, *Lin. S. P.* 327.
Common elm.

Hedges; arborescent; April and May.

Bark of the twigs smooth; *flowers* purplish.—Wood hard, tough; bark mixed with meal to make bread in time of scarcity; young leaves eaten greedily by silkworms; decoction of the inner bark diuretic.

2. *Ulmus suberosa.* *Cork-barked elm.*

Leaves doubly serrate, rough, pointed, unequal at bottom; *flowers* peduncled, mostly 5-cut; *samara* rounded, naked.

Ulmus minor, folio augusto scabro, *Raii Syn.* 469, 2; *Ger. em.* 1480, 2.
Ulmus minor, *Park.* 1404.
Ulmus suberosa, *Erkr. Arb.* 14, 1.
Narrow-leaved elm.

Hedges; arborescent; April.

Bark of the twigs corklike, cut; *branches* spreading; *twigs* nearly 2-rowed.

3. *Ulmus glabra.* *Smooth-leaved elm.*

Leaves doubly serrated, smooth, unequal at bottom; *flowers* nearly sessile, 5-cut; *samara* reverse-ovate, naked.

Ulmus folio glabro, *Raii Syn.* 469; *Ger. em.* 1481, 4; *Park.* 1404.
Ulmus glabra, *Cullum* 97; *Engl. Bot.* 2248.
Ulmus montana β, *Smith Fl. Brit.* 282.
Ulmus campestris, 3, *With. Bot. Arr.* 279.
Witch elm.

Hedges; arborescent; March.

Bark smooth; *branches* spread, scattered and hanging down long; *leaves* rather stiff.

4. *Ulmus montana.* *Mountain elm.*

Leaves doubly serrate, pointed, rough, unequal at bottom; *flowers* peduncled, effused, mostly 6-cut; *samara* rounded.

Ulmus folio latissimo scabro, *Raii Syn.* 469; *Ger. em.* 1418, 3.
Ulmus latiore folio, *Park.* 1404.
Ulmus effusa, *Willd. S. P.* 1, 1325.
Ulmus campestris β, *Relhan Cant.* 107.
Ulmus campestris γ, *Huds. Fl. Angl.* 129.
Ulmus glabra, *Huds. Fl. Angl. ed.* 1, 95.
Ulmus campestris, *Fl. Dan.* 632.
Ulmus montana, *Bauh. Pin.* 427; *With. Bot. Arr.* 279.
Witch hasel, Statutes, as 8 Eliz. 10. *Broad-leaved elm.*

Woods and hedges; arborescent; April.

Bark of the twigs smooth, coming off easily; *flowers* larger than those of the witch elm, appearing on younger trees than those of the common elm; *leaves* much resembling those of the hasel, but the point is sharper.—Wood not so valuable as the common elm, used formerly for long bows for poor persons; and for magical purposes, whence its name.

5. *Ulmus major.* *Great elm.*

Leaves unequally serrated, rough, unequal at bottom; *flowers* nearly sessile, 4-lobed; *samara* reverse-ovate, naked.

Ulmus major, *Engl. Bot.* 2542.
Ulmus Hollandica, *Mill. Dict.*

Cultivated in hedges; arborescent; March.

Branches spreading; bark corklike, wrinkled; *samara* scarcely cut.

Fam. IX. 9. URTICEÆ.

Flowers unisexual or hermaphrodite; *perigonium* simple, free, 3 or 5-cut, persisting.—Male. *Stamens* 3 to 5, inserted into the base of the perigonium.—Female. *Ovary* 1, free; *styles* 2, 1 or 2-lobed; *stigmata* 2; *utriculus* dry, 1-seeded; *seed* pendent; *perisperm* 0; *corculum* straight or spirally twisted; *radicle* above.—*Stem* herbaceous; *leaves* alternate, rarely opposite, mostly stipuled; *flowers* solitary, amentaceous or spiked.

A. *Stamens* 4; *stigma* 1.

Flowers racemose, the female bivalve .... Urtica. 18.
Flowers in a common involucrum .... Parietaria. 19.

B. *Stamens* 5; *stigmata* 2.

Flowers, the female in a dense spike .... Lupulus. 17.
Flowers, the female axillary ..... Cannabis. 20.
Flowers in a common involucrum .... Xanthium. 21.

I. 17. LUPULUS. Brunsfel. *Hop.*

Flowers dioicous.—Male. *Flowers* racemose; *perigonium* 5-parted; *stamens* 5; *filaments* short; *anthers* oblong.—Female. *Flowers* in dense verticillate spikes; *perigonium* 2-sepaled; sepales membranaceous, persistent, unequal; outer very large, ovate, involute at the base; inner small, reversely ovate; *ovary* 1; *styles* 2; *stigmata* 2; *utriculus*

membranaceous; *seed* 1; shell crustaceous; corculum spiral; cotyledons linear.—*Stem* annual, twining, rough, angular; *leaves* petioled, opposite, palmately ribbed, lobed or not cut; *stipule* intrafoliaceous, reflex; *flowers* axillary or terminal, peduncled, solitary.

Lupulus communis. *Common hop.*

Lupulus mas et fœmina, *Raii Syn.* 137.
Lupulus salictarius, *Ger. em.* 885.
Lupulus seu sativus, seu sylvestris, *Park.* 176.
Humulus Lupulus, *Lin. S. P.* 1457.
Lupulus communis, *Gærtn.* 1, 358.

Woods and hedges; also cultivated; perennial; July.

Root branchy; *stem* very long; *leaves* cordate; *stipules* not cut, reflex; *female spike* aromatic, bitter.—Stem makes excellent cloth, cordage, and paper, if steeped all the winter, then dried and dressed like hemp; female flowers infused in wort, or boiled with it, render the liquor bitter, and prevent it growing sour so soon as otherwise it would; a pillow stuffed with them produces sleep when opium fails; and a tincture made with spirit of wine or brandy is in general preferable to that of opium as a narcotic, although inferior as a spasmodic; young shoots eaten in spring as asparagus; a decoction of the roots, or an extract of them is sudorific.

The hopgrowers distinguish the garlick, long white, and oval hop.

II. 18. URTICA. Pliny. *Nettle.*

Monoicous, rarely dioicous.—Male. *Flowers* racemose; *perigonium* 4-parted; *stamens* 4; filaments long, before the anthesis curved; *barren pistill* glandular, cyathiform.—Female. *Flowers* racemose, rarely capitate; *perigonium* 2-sepaled; *ovary* 1, free; *stigma* 1, sessile, pubescent; *utriculus* rather membranaceous, girded by the sepales; *seed* compressed; *corculum* straight; *cotyledons* leaflike; *radicle* above.—*Herb* generally covered with pungent, excretory hairs; *stem* 4-angular; *leaves* petioled, stipuled, opposite, rarely alternate, palmately ribbed; *flowers* axillary.

1. *Urtica dioica.* *Dioicous nettle.*

Leaves opposite, cordate, ovate, lanceolate, largely serrated; *racemes* much branched, in pairs, longer than the petiole; *plants* mostly dioicous.

Urtica racemifera major perennis, *Raii Syn.* 139, 1.
Urtica urens, *Ger. em.* 706, 2.
Urtica major vulgaris, and Urtica media sylvestris, *Park.* 440.
Urtica dioica, *Lin. S. P.* 1396.
Common stinging-nettle. Great stinging-nettle.

Banks and hedges; perennial; July and August.

Root creeping; *herb* dark green; *stem* erect, 3 feet high; *stipules* ovate, erect; *racemes* many-flowered.—Stalk dressed as hemp, for cordage, cloth, or paper; young shoots eaten in spring as a potherb; leaves recover paralytic limbs by whipping; one pressed against the roof of the mouth will stop a bleeding at the nose; juice dyes wool green; a decoction of the herb with salt used to coagulate milk.

2. *Urtica urens.* *Stinging nettle.*

Leaves opposite, elliptical, 3 or 5-ribbed, acutely serrated; *racemes* in pairs, nearly simple, shorter than the petiole.

Urtica minor, *Raii Syn.* 140, 2; *Ger. em.* 707, 3.
Urtica urens, *Lin. S. P.* 1396.
Small stinging-nettle.

Fields and way-sides; annual; June to October.

Roots fibrous; *herb* light green; *stipule* reflexed; *raceme* androgynous.

3. *Urtica pilulifera.* *Pelletbearing nettle.*

Leaves opposite, ovate, broadly serrate; *fruitbearing heads* globose, peduncled, in pairs.

Urtica pilulifera, *Raii Syn.* 140, 3; *Lin. S. P.* 1395.
Urtica Romana, *Ger. em.* 706, 1; *Park.* 440.
Roman nettle.

Ruins by the sea-side; annual; June and July.

Root fibrous; *stem* blueish; *leaves* rarely rather heart-shape.

III. 19. PARIETARIA. Pliny. *Pellitory-of-the-wall.*

Flowers 2 hermaphrodite and 1 female in a 6 or 8-leaved involucrum.—Herm. *Perigonium* 4-sepaled; *stamens* 4; *filaments* at first incurved, afterwards spreading elastically; *anthers* double, opening elastically; *ovary* 1, above; *stigma* penecilliform; *utriculus* crustaceous, shortly pedicelled, in the persistent sepales; *seed* 1, inverse; corculum straight; cotyledons leaflike; radicle above.—Fem. Like the hermaphrodite, but without the stamens.—*Herb* rather rough, juicy; *leaves* alternate; *flowers* glomerate, axillary.

Parietaria officinalis. *Common pellitory-of-the-wall.*

Leaves lanceolate, ovate, pointed, above somewhat shining; beneath hairy, base 1-ribbed; *leaflets* of the involucrum ovate; *stem* nearly erect.

Parietaria, *Raii Syn.* 158; *Ger. em.* 330.
Parietaria vulgaris, *Park.* 437.
Parietaria officinalis, *Lin.* 1492.

Walls and ruins; perennial; June to September.

Stem much branched, reddish, shining; *leaves* oblique, blackish green, lateral ribs palmate, springing out above the base.—Leaves strewed in granaries to drive away weevils; juice diuretic, contains nitre, sometimes in considerable quantities.

IV. 20. CANNABIS. Dioscorides. *Hemp.*

Dioicous.—MALE. *Perigonium* 5-sepaled; *stamens* 5; *filaments* short; *anthers* oblong.—FEM. *Perigonium* oblong, opening on the side; *ovary* 1; *styles* 2; *stigmata* 2; *pericarp* crustaceous, 2-valved, rather globose, enclosed in the perigonium; *corculum* curved, inverse; *cotyledons* ovate, thick; *radicle* incurved, above.—*Herb* erect; *leaves* stipuled, digitate, the lower opposite, the upper alternate, the floral sometimes simple; *male flowers* on panicles, axillary or terminal; female 2, sessile, on the top of the twigs, with the rudiment of a new shoot between them.

Cannabis sativa. *Cultivated hemp.*

Cannabis sativa, *Raii Syn.* 138; *Lin. S. P.*
Cannabis mas, et fœmina, *Ger. em.* 708, 1 and 2.
Cannabis sativa mas et fœmina, *Park.* 597.
Male. *Female hemp. Barren hemp. Summer hemp.*
Female. *Male hemp. Steel hemp. Charl hemp. Winter hemp.*

Cultivated in rich land; annual; *male*, July; *female* August.

Stem macerated in water, and dressed for its fibres, used for cordage, strong linen, and paper: seeds boiled in milk for coughs and the jaundice, also used to cause fowls and birds to lay eggs; and pressed for its oil.

V. 21. XANTHIUM. Dioscorides. *Ditch-burr.*

Monoicous.—MALE. *Involucrum* many-leaved, many-flowered; *clinanthium* paleaceous; *perigonium* tubular, five-lobed; *stamens* 5; *anthers* approximate.—FEM. *Involucrum* 1-leafed, oblong, 2-flowered, outside muricated, inside two-

celled; *perigonium* 0; *ovary* 1; *styles* 2, persistent; *utriculus* membranaceous, enclosed in the hardened involucrum; *seed* erect, corculum straight; *cotyledon* ovate; *radicle* below.—*Herb* hamous; *leaves* petiolate, alternate, rather rough, palmately ribbed; *flowers* spiked, axillary or terminal; *spike* short; male flowers above, female below.

Xanthium inerme. *Unarmed ditch-burr.*

Stem not armed; *leaves* heartshape, 3-ribbed at bottom.

Xanthium, seu Lappa minor, *Raii Syn.* 140; *Park.* 1222.
Bardana minor, *Ger. em.* 809, 2.
Xanthium Strumaria, *Lin. S. P.* 1400.
Louse burr. Ditch burr. Lesser burr-dock.

Deep rich soil; annual; August and September.

Root fibrous; *stem* much branched; *leaves* lobed, serrated; *flowers* green.

Fam. X. 10. EUPHORBIACEÆ.

Flowers unisexual; *perigonium* simple, free, 3 or 4-cut, sometimes 0.—MALE. *Stamens* 1 to 12; *filaments* often jointed in the middle, inserted on the receptacle; *anthers* double.—FEM. *Ovary* free, often stipitate; *styles* 2 or 3; *stigmata* 2 or 3, 2-cut or lobed; *regma* 2 or 3-coccous; *cocci* 1 or 2-seeded; *placentarium* apicillate; *seed* appended; *corculum* straight, flat; *radicle* laterally adverse; *perisperm* fleshy, involute.—*Stem* herbaceous or frutescent; *juice* often milklike, very acrid; *flowers* either solitary, spiked, or girt with an involucrum.

A. *Monoicous; flowers in an involucrum; stamen* 1.

Bracteæ many; *bracteolæ* 2;
outer lobe of the involucrum ovate, not cut
GALARHŒUS. 22.

Bracteæ many; *bracteolæ* 2;
outer lobe of the involucrum lunate, 2-horned ESULA. 23.

Bracteæ many; *bracteolæ* connate;
outer lobe of the involucrum lunate, 2-horned
CHARACIAS. 24.

Bracteæ and *bracteolæ* 0;
outer lobe of the involucrum ovate, not cut
CHAMÆCYCE. 25.

B. *Flowers unisexual, naked; stamens* 4 *to* 12.

Monoicous; stamens 9 to 12; *stem* herbaceous ..... MERCURIALIS. 26.

Dioicous; stamens 4; *stem* arborescent ..... BUXUS. 27.

A. *Monoicous*, herbaceous; *perigonium* 0; *involucrum* 1-leafed, cup-shaped, 3 or many-flowered; *flowers* pedicelled; one of them female, trigynous; the others male, monandrous.

II. 22. GALARHŒUS. Haworth. *Wartwort.*

Bracteæ many; *bracteolæ* 2, cordate; *involucrum* campanulate, 8-cut; lobes alternate, the outer coloured, not cut, rounded; inner membranaceous, upright.—MALE. *Flowers* many; *perigonium* many-parted; sepales rather feathery; *filament* jointed in the middle.—FEM. solitary, central; *perigonium* 0; *ovary* pedicelled; *stigmata* 3, 2-forked; *regma* exserted, 3-coccous, 3-seeded.—*Root* fusiform; *herb* milky, smooth; *stem* leafy; *flowers* terminal, umbelled, involucrated.

a. *Regma bald, smooth.*

1. *Galarhœus decussatus.* *Crossing wartwort.*

Umbells 4-rowed, forked; *leaves* opposite, sessile, quite entire; base cordate, 4-rowed; *seeds* ovate, reticulated.

Lathyris, seu Cataputia minor, *Ger. em.* 503, 18.
Euphorbia Lathyris, *Lin. S. P.*
Tithymallus Lathyris, *Lamarck Fl. Fr.* 3, 99.
Euphorbia decussata, *Salisb. Prod.* 389.
Galarhœus Lathyris, *Haworth Succ. Pl.* 143.
Caper spurge.

Dry stony places; perennial; May and June.

Stem 2 to 4 feet high; *herb* purple glaucous.

2. *Galarhœus helioscopius.* *Sun wartwort.*

Umbells 5-rowed, forked; *bracteola* reversely ovate; *leaves* wedgeshape, serrated; *seeds* ovate, reticulated.

Tithymalus helioscopius, *Raii Syn.* 313, 8; *Ger. em.* 498, 2; *Park.* 186.
Euphorbia helioscopia, *Lin. S. P.* 658.
Galarhœus helioscopius, *Haworth Succ. Pl.* 154.
Sun spurge.

Cultivated fields; annual; July and August.

Herb light green; *stem* branchy at bottom; *leaves* bald; *flowers* yellow.—Juice of this and the other species corrodes warts, and destroys the nerves of aching teeth: also used to raise blisters behind the ears.

b. *Capsules bald, warty.*

3. *Galarhœus platyphyllus.* *Broad-leaved wartwort.*

Umbell 5-rayed, 3-rayed, forked; *bracteola* ovate rhomboidal, keeled, hairy; *leaves* lanceolate, serrulated; *seeds* ovate, smooth.

Tithymalus platyphyllos Fuchsii, *Raii Syn.* 312, 4 *.
Euphorbia platyphylla, *Lin. S. P.* 660.
Galarhœus platyphyllus, *Haw. Succ. Pl.* 151.
Broad-leaved spurge.

Fields; annual; July and August.

Root fibrous; *stem* upright, bald; *leaves* sessile, rather glaucous, subpilose, lower leaves rather petioled.

β. *strictus.* Smaller, slenderer; *umbells* 3 or 4-rayed; *stem* spreading at bottom.

Tithymalus verrucosus, *Raii Syn.* 312, 3.
Tithymalus verrucosus Dalechampii, *Park.* 187.
Euphorbia stricta, *Lin. Syst. Nat.* 1040.
Euphorbia verrucosa, *Huds. Fl. Angl.* 209.
Galarhœus strictus, *Haworth Succ. Pl.* 151.

4. *Galarhœus Hybernus.* *Irish wartwort.*

Umbells 5 or 6-rayed, forked; *bracteola* oval; *leaves* reversely ovate, not cut in the least, blunt, rather bald; *sterile branches* 0; *capsule* prickly warty.

Tithymalus Hibernicus, *Raii Syn.* 312, 5.
Tithymalus platyphyllus, *Ger. em.* 500.
Euphorbia Hyberna, *Lin. S. P.* 662.
Galarhœus Hybernus, *Haw. Succ. Pl.* 145.
Makinboy. Knotty-rooted spurge.

Fields; perennial; June.

Root fusiform; *stem* simple, 2 feet high; *leaves* uniform; *umbells* few-flowered; *lobes* of the involucrum kidney-shape.

II. 23. ESULA. Pliny. *Esula.*

Bracteæ many; *bracteolæ* 2, leaves distinct; *involucrum* lobed; *lobes* 8 or 10; the outer deflected, 2-cut, lunate; inner upright, membranaceous.—MALE FLOWERS many; *perigonium* many-parted; *sepales* rather feathery; *filament* jointed in the middle.—FEM. solitary, central; *perigonium* 0; *ovary* pedicelled; *stigmata* 3, 2-forked; *regma* exserted, 3-coccous, 3-seeded.—*Root* fusiform; *herb* milky, smooth; *stem* leafy; *flowers* terminal, umbelled, involucrated.

a. *Regma bald, smooth; seeds angular; annual.*

1. *Esula rotundifolia.* *Round-leaved esula.*

Umbells 3-rayed, forked; *bracteolæ* ovate; *leaves* not in the least cut, reverse-ovate, petioled; *seeds* rather 6-sided, pitted.

Tithamylus parvus annuus, foliis subrotundis non crenatis, Peplus dictus, *Raii Syn.* 313, 9.
Peplus sive Esula rotunda, *Ger. em.* 503, 19.
Euphorbia Peplus, *Lin. S. P.* 653.
Esula rotundifolia, *Rivinus Tetrap. irr.* 118.
Esula Peplus, *Haworth Succ. Pl.* 157.
Euphorbia (Esula) Peplus (oleraceus), *Pers. Syn.* 2, 14.

Cultivated fields; annual; July and August.
Root fibrous; *herb* light green, erect, branchy; *flowers* yellow, small.

2. *Esula exigua.* *Dwarf esula.*
Umbells 3 or 5-rayed, forked; *bracteolæ* lanceolate; *leaves* sessile, linear, not cut; *seeds* nearly 4-sided, traversely corrugated.

Tithymalus leptophyllus, *Raii Syn.* 313, 7; *Park.* 193.
Esula exigua Tragi, *Ger. em.* 503, 17.
Euphorbia exigua, *Lin. S. P.* 654.
Esula exigua, *Haworth Succ. Pl.* 157.

Cornfields; annual; July.
Herb 6 in. high, bald; *flowers* very small, yellow.

b. *Regma bald, smooth; seeds ovate; perennial.*

3. *Esula Portlandica.* *Portland-island esula.*
Umbells 5-rayed, forked; *bracteolæ* nearly heartshape, concave, mucronulate; *leaves* linear, reversely ovate, pointed, bald, spreading; *seeds* ovate, reticulate.

Tithymalus maritimus minor Portlandicus, *Raii Syn.* 313, 6.
Euphorbia Portlandica, *Lin. S. P.* 656.
Esula Portlandica, *Haworth Succ. Pl.* 154.

Sea-coasts; perennial; August.
Root branchy; *herb* glaucous, 1 foot high; *capsules* rough at the angles; *involucrum* 8-cut, outer lobes yellow.

4. *Esula paralia.* *Sea esula.*
Umbell 5-rayed, forked; *bracteolæ* cordate kidneyshape; *leaves* lanceolate, imbricate, concave; *seeds* ovate, smooth, spotted with red.

Tithymalus paralius, *Raii Syn.* 312, 4; *Ger. em.* 498, 1.
Euphorbia Paralias, *Lin. S. P.* 657.
Euphorbia paralia, *Engl. Bot.* 1915.
Tithymalus maritimus, *Lamarck Fl. Fr.* 3, 90.
Esula paralia, *Haworth Succ. Pl.* 144.
Sea spurge.

Sea-side; perennial; August and September.
Herb light bluish grey, very smooth; 12 in. high; *involucrum* 10-cut, outer lobes fulvous.

5. *Esula cupressina.* *Cypress esula.*

Umbell 7 to 15-rayed, forked; *bracteolæ* rather heart-shape; *leaves* on the stem lanceolate; on the sterile branches linear, crowded; *seeds* ovate, smooth.

Tithymalus cupressinus, *Ger. em.* 499, 5.
Euphorbia Cyparissias, *Lin. S. P.* 661.
Esula Cyparissias, *Haworth Succ. Pl.* 155.
Cypress spurge. Welcome to our house.

Woods and sterile fields; perennial; May and June.

Root creeping; *stem* a foot high.

6. *Esula Dalechampii.* *Dalechamp esula.*

Umbells 6 or 8-rayed, forked, crowded; *bracteolæ* ovate, obtuse; *leaves* on the sterile branches and stem linear, obovate.

Tithymalus pineus, *Ger. em.* 499, 6.
Euphorbia Esula, *Lin. S. P.* 660.
Esula, *Rivinus Tetr. irr.* 116.
Pine spurge.

Woods; perennial; July.

Root woody; *stem* 18 in. high, branchy at bottom, bald.

III. 24. CHARACIAS. *Spurge.*

Bracteæ many; *bracteolæ* connately perfoliate; *involucrum* 8 or 10-lobed; outer lobes distant, 2-cut, lunate; inner upright, membranaceous.—MALE FLOWERS many; *perigonium* many-parted; *sepales* rather feathery; *filament* jointed in the middle. — FEM. solitary, central; *perigonium* 0; *ovary* pedicelled; *stigmata* 3, 2-forked; *regma* exserted, 3-coccous, 3-seeded.—*Stem* simple, upright, shrubby, pubescent, generally naked at bottom; *leaves* pubescent, perennial; *umbells* many-rayed.

1. *Characias purpurea.* *Purple spurge.*

Umbells many-rayed, forked; *bracteolæ* naked; *leaves* lanceolate, very short, pubescent; *stem* simple, shrubby *regma* hairy.

Tithymalus characias Monspeliensium, *Raii Syn.* 312, 2; *Ger. em.* 499.
Euphorbia characias, *Lin. S. P.* 662.
Tithymalus purpureus, *Lamarck Fl. Fr.* 3, 98.
Esula characias, *Haworth Succ. Pl.* 155.
Sweet wood-spurge.

Mountainous woods; shrubby; March and April.

Stem pubescent, 3 feet high, tubercular, reddish; *lobes* of the involucrum lunate, blackish purple.

2. *Characias amygdaloides.* *Almond spurge.*

Umbells 5 to 8-rayed, forked, lanceolate, rather heartshape; *leaves* lanceolate, not cut, obtuse, hairy; *seeds* ovate, smooth; *regma* bald.

Tithymalus characias amygdaloides, *Raii Syn.* 312, 1; *Ger. em.* 500, 9.
Euphorbia amygdaloides, *Lin. S. P.* 662, not of Persoon.
Euphorbia sylvatica Lin. ? *Jac Fl. Austr.* 4, 375.
Esula amygdaloides, *Haworth Succ. Pl.*
Unsavoury spurge.

Woods and heaths; perennial; March and April.

Stem simple, reddish, hairy, naked at bottom; *leaves* perennial; *lobes* of the involucrum lunate, pointed.

IV. 25. CHAMÆSYCE. Dioscorides. *Peplis.*

Bractea and *bracteola* 0; *involucrum* 8 to 10-parted; outer lobes fleshy, not cut, rounded above; inner upright, membranaceous.—MALE FLOWERS many; *perigonium* many-parted; sepales rather feathery; *filament* jointed in the middle.—FEM. solitary, central; *perigonium* 0; *ovary* pedicelled; *stigmata* 3, 2-forked; *regma* exserted, 3-coccous, 3-seeded.—*Herbaceous; stem* angular, forked, leafy, rather prostrate; *leaves* opposite, unequal at the base, ribbed; *stipules* intrafoliaceous; *involucra* small, axillary, solitary.

Chamæsyce maritima. *Sea peplis.*

Leaves not cut, nearly heartshape; *involucrum* solitary; *stem* procumbent; *seeds* ovate, smooth; *regma* bald.

Tithymalus maritimus supinus annuus, Peplis dictus, *Raii Syn.* 313, 10.
Peplis, *Ger. em.* 503, 20; *Park.* 194.
Euphorbia Peplis, *Lin. S. P.* 652.
Euphorbia Chamæsyce, Peplis, *Persoon Syn.* 2, 14.
Anisophyllum Peplis, *Haworth Succ. Pl.* 154.
Hyssop spurge.

Sea-shore; annual; July and August.

Root long; *stem* divaricating, 4-angular, reddish; *leaves* petioled, rather fleshy, purplish green, 1-ribbed, unequally eared at bottom; *stipulæ* many, bristlelike.

V. 26. MERCURIALIS. *Mercury.*

Dioicous, rarely monoicous; *perigonium* 3-sepaled.—MALE. *Stamens* 9; *anthers* globular, double.—FEM. *Ovary* 2-bunched; *styles* 2; *stigmata* 4; *regma* 2-coccous; *seeds* single; *perisperm* fleshy; *corculum* inverse; *radicle* above.—*Herb* annual; *leaves* opposite, stipuled; *stipulæ* intrafoliaceous; *flowers* axillary or terminal, spiked or fascicled.

a. *Monoicous, barren filaments* 0; *herbaceous, smooth.*
Mercurialis.

1. *Mercurialis annua.* *Annual mercury.*

Stem brachiate; *leaves* bald; *flowers* glomerately spiked; *root* fibrous.

Mercurialis annua glabra vulgaris, *Raii Syn.* 139, 2.
Mercurialis mas et fœmina, *Ger. em.* 332, 1, and 2.
Mercurialis vulgaris mas et fœmina, *Park.* 295.
Mercurialis annua, *Lin. S. P.* 1465.
French mercury.

Ruins; annual; July to September.

Herb light green, smooth, shining, upright, fœtid; *leaves* ovate, serrated; *capsules* muricated.—Mucilaginous, used in clysters; juice takes away warts.

b. *Dioicous; barren filaments* 2; *herbaceous, or shrubby; rough.* Cynocrambe.

2. *Mercurialis perennis.* *Perennial mercury.*

Stem quite simple; *leaves* rough; *flowers* with long pedicells; *root* creeping.

Mercurialis perennis repens, cynocrambe dicta, *Raii Syn.* 138, 1.
Cynocrambe mas et fœmina, *Ger. em.* 333, 1.
Mercurialis sylvestris cynocrambe dicta vulgaris, mas et fœmina, *Park.* 292.
Mercurialis perennis, *Lin. S. P.* 1465.
Mercurialis nemoralis, *Salisb. Prod.* 390.
Dog's mercury.

Woods and hedges, male and female plants generally in separate patches; perennial; April and May.

Root much branched; *stem* 18 in. high, upper part densely leaved; *leaves* petiolate, ovate; *stipulæ* membranaceous, reflex; *capsules* pilose, rough.—Mildly laxative when boiled as greens; but a case has occurred in which being eaten fried with bacon, it produced hypercatharsis and convulsions, and was fatal to three children, but their two parents escaped.

VI. 27. BUXUS. Pliny. *Box.*

Monoicous; *perigonium* 3 to 4-sepaled. — Male. *Stamens* 4, inserted on the rudiment of the germen; *barren filaments* 2; *anthers* arrowshape.—Fem. *Barren filaments* 3; *styles* 3; *stigmata* 3, blunt; *regma* 3-coccous; cocci two-seeded.—*Stem* arborescent; *secondary branches* opposite, 4-sided, girt below with many bracteæ; *leaves* opposite, perennial; *petiole* decurrent, making the branches angular; *flowers* glomerate, axillary, nearly sessile, scaly; female single, central; male many, in the circumference.

Buxus sempervirens. *Evergreen box.*

Leaves ovate; *edge* of the petiole rather hairy; *anthers* ovate, arrowshape.

Buxus, *Raii Syn.* 445, 1; *Ger. em.* 1410.
Buxus arbor vulgaris, *Park.* 1428.
Buxus sempervirens, *Lin. S. P.* 1394.

Chalky hills; arborescent; April.

Tree low, bald; *leaves* often nicked, shining; *flowers* yellowish.—Wood yellowish, very hard, smooth and tough; also sudorific; leaves cathartic and vermifuge.

β. *angustifolia.* *Stem* arborescent; *leaves* lanceolate.

Buxus angustifolia, *Raii Syn.* 445, 2.

γ. *subfruticosa.* *Stem* low, rather shrubby; *leaves* small, reverse ovate.

Fam. XI. 11. ARISTOLOCHIÆ. Jussieu.

Perigonium simple, adherent, 1-leafed, 1-sepaled, few-lobed, semi-petaloid; æstivation valvular; *stamens* definite 6 or 12, epigynous, sessile; *style* short; *stigma* many-lobed; *carcerule* coriaceous, 6 or 8-celled; dissepiments vertical; placentarium axillary; *seed* horizontal or ascending; corculum small, cordate, hidden, basilary; perisperm horny, radicle below.

Perigonium tubular, apex ligulate.. ARISTOLOCHIA. 28.
Perigonium campanulate, 3-lobed ..... ASARUM. 29.

I. 28. ARISTOLOCHIA. Dioscorides. *Birthwort.*

Perigonium tubular, bellied at bottom, dilated at top, ligulate; *stamens* 6, on the style; *filaments* very short, bearing the anther on one side; *style* very short, thick; *stigma* 6-cut; *carcerule* 6-celled, dissepiments membranaceous, not 2-partile; *seeds* horizontal, incumbent, flat, not margined, winged below.—*Stem* volubile or erect; *leaves* alternate, pedately veined; *stipule* 0; *flowers* axillary.

Aristolochia infesta. *Troublesome birthwort.*

Leaves petiolate, roundish, heartshape, rather blunt; *stem* upright; *peduncles* 1-flowered, aggregate; *perigonium* upright; *lip* oblong.

Aristolochia Saracenica, *Ger. em.* 847, 4.
Aristolochia Clematitis, *Lin. S. P.* 1364.
Aristolochia infesta, *Salisb. Prod.* 215.
Saracen's Birthwort.

Woods and ruins; perennial; July and August.

Herb light green, bald; *rhizoma* creeping; *stem* simple, rather flexuous; *leaves* not in the least cut; *flowers* yellowish green, fecundated by the irritation of the tipula pennicornis.

II. 29. ASARUM. Dioscorides. *Asarabacca.*

Perigonium bellshape, 3-lobed; lobes incurved; *stamens* 12; *filaments* produced beyond the anthers; *anthers* 2-celled, one cell on each side of the filament; *style* 1, short; *stigmata* 3-rayed; *carcerule* adherent, coriaceus, 6-celled; dissepiments separate at the axis; *seeds* few, ascending, meniscus, with an elevated ridge below.—*Rhizoma* creeping; *stem* simple, short, 2-leaved, 1-flowered; *leaves* petiolate, opposite; *flowers* terminal, peduncled.

Asarum Europæum. *European asarabacca.*

Leaves 2, kidneyshape, obtuse, not in the least cut.

Asarum, *Raii Syn.* 158; *Ger. em.* 836, 1.
Asarum vulgare, *Park.* 266.
Asarum Europæum, *Lin. S. P.* 633.
Asarum lucidum, *Salisb. Prod.* 344.
Common asarabacca. Folefoot. Hazelwort.

Woods in the North; perennial; May.

Stem round, pubescent; *flowers* blackish purple, villous, drooping.—Root coarsely powdered purgative, finely powdered emetic; leaves infused in doses of a drachm or two are emetic, in powder sternutatory, the basis of most cephalic snuffs.

Fam. XII. 12. SANTALACEÆ. Brown. *Elæagnearum et Onograrum genera quædam*, Jussieu. *Thisiaceæ*, Richard. *Elæagnoideæ*, Ventenat. *Calyciflorum pars*, Linnæus. *Elæagnearum pars*, Adanson.

Perigonium adherent, 4 or 5-cut, rather coloured; *æstivation* valvular; *stamens* 4 or 5, opposite to the lobes of the perigonium, and inserted at the base of the lobes; *ovary* 1-celled, 2 or 4-seeded; ovules affixed near the tip of the central placentarium, pendulous; *style* 1; *stigma* simple or lobed; *pericarp* (scleranthum?) 1-seeded, nut or drupe-like; *perisperm* fleshy, same form as the seed; *corculum* cylindrical, central, inverse; *radicle* above. — *Shrubby* or undershrubby; *leaves* alternate, or somewhat opposite, undivided, minute, rarely stipule-like; *stipule* 0; *flowers* small; rather spiked, rarely umbelled, or solitary.

30. THESIUM. Linnæus. *Thesium.*

Perigonium tubular, funnel-shape or hypocrateriform, 4 or 5-cut, persistent, not glandular, with no epigynous disk; *stamens* furnished on the outside with a fine bundle of villi; *stigma* nicked; *pericarp* barked, crowned.—*Leaves* alternate, slender, linear; *racemes* terminal; *bracteæ* leaf-like, persistent, outer ones soldered to the peduncle; lateral ones small, sometimes wanting; *flowers* whitish on the inside.

Thesium linophyllum. *Flax-leaved thesium.*

Stem erect, rather branchy; *racemes* leafy; *flowers* pedicelled; *bracteæ* 3; *leaves* linear, lanceolate; *tube* of the perigonium very short.

Linaria adulterina, *Raii Syn.* 202; *Ger. em.* 555, 14.
Pseudolinaria montana alba, *Park.* 459.
Thesium linophyllum, *Lin. S. P.* 301.
Thesium linifolium, *Salisb. Prod.* 146.
Bastard toadflax.

High chalky pastures; perennial; July.

Root woolly; *herb* stiff, bald; *stem* 6 in. high; *leaves* facing one way, edge rough; *raceme* many-flowered.

Fam. XIII. 13. ELÆAGNEÆ. Brown. *Elæagnearum pars*, Jussieu, Adamson. *Elæagnoideæ*, Ventenat. *Calyciflorum pars*, Linnæus.

Perigonium free, not cohering to the ovary, 1-leaved, tubular, 2 to 5-lobed; æstivation valvular; *stamens* inserted on the base of the lobes, one or two in each lobe; *ovary* simple; *ovule* 1, upright; *stigma* simple; *pericarp* drupaceous, perisperm 0; cotyledons plano-convex, plumule minute; radicle below, straight. — *Stem* arborescent or shrubby; *leaves* alternate, entire; *flowers* hermaphrodite or unisexual, axillary.

31. HIPPOPHAE. Dioscorides. *Sallow-thorn.*

Dioicous. — Male. *Perigonium* 2-parted; *anthers* 4, nearly sessile.—Fem. *Perigonium* tubular, 2-cut; *style* 1; *stigma* oblique, exserted; *drupe* globose; shell crustaceous, hard, shining.—*Stem* shrubby; *branches* spinous at the tip; *leaves* spread, spotted; *flowers* axillary, solitary, greenish.

Hippophae littoralis. *Shore sallow-thorn.*

Leaves linear, lanceolate; above bald; beneath whitish, scaly.

Rhamnoides fructifera, foliis salicis, baccis leviter flavescentibus, *Raii Syn.* 445.
Rhamnus secundus Clusii, *Ger. em.* 1334, 2.
Rhamnus primus Dioscoridis Lobelio, sive littoralis, *Park.* 1006.
Hippophae Rhamnoides, *Lin. S. P.* 1452.
Hippophae littoralis, *Salisb. Prod.* 71.
Sea buckthorn.

Sea-shore; arborescent; May.

Small tree; *younger branches* reddish; *leaves* dark green above, silvery beneath; petioles short; *berry* mucronulate, reddish yellow, one-spotted.

Fam. XIV. 14. THYMELEÆ.

Perigonium free, tubular, coloured; limb 4 rarely 5-cut; æstivation imbricate; *stamens* inserted in the mouth of the tube, definite, 8 rarely 2 or 4, if there is less or only as many as the lobes, opposite; but if twice as many, in two series, the upper series opposite to the lobes, the lower alternating; *barren filaments* few; *anthers* 2-celled; cells opening lengthways in the middle; *ovary* simple, ovule 1, pendulous, placentarium lateral, subapicular; *style* 1; *stigma* not cut; *pericarp* nutlike or drupaceous; *perisperm* 0, or very thin, fleshy; corculum straight, inverse; radicle short, above; cotyledons plano-convex; plumula inconspicuous.—*Stem* shrubby; *bark* very tough; *leaves* alternate or opposite, not in the least cut; *stipule* 0; *flowers* capitate, or spiked; terminal or axillary, solitary.

32. DAPHNE. Dioscorides. *Daphne.*

Perigonium funnelshape, withering; *limb* 4-cut; *stamens* 8, hidden; *style* terminal, very short; *stigma* capitate; *drupe* berrylike; *putamen* crustaceous, shining.—*Stem* shrubby, naked at bottom; *leaves* spread, or rarely opposite; *flowers* bracteated, axillary or terminal, often glomerate.

A. *Perigonium separable into 2 lamina; flowers lateral, coloured; leaves annual.* Mezereon.

1. *Daphne florida.* *Flowering daphne.*

Flowers lateral, sessile, in threes; *leaves* lanceolate, bald, appearing after the flowers, annual.

Chamælea Germanica, sive Mezereon, *Ger. em.* 1402.
Daphne Mezereum, *Lin. S. P.* 509.
Thymælea Mezereum, *Gærtn. Sem. et Fr.* 1, 188.
Daphne florida, *Salisb. Prod.* 281.
German olive-spurge.

Woods; shrubby; March and April.

Twigs bearing flowers in the middle and leaves at the end; *flowers* bracteate, rose-colour or whitish, odorous; *drupe* red.—Drupes corrosive, gr. xij. killed a young woman immediately; bark of the root 2 drms, boiled in 3 pints of water to 2, and taken daily, resolves venereal nodes; chewed, it cured a palsy of the tongue.

B. *Perigonium separable into 2 lamina; flowers axillary, racemose, greenish; leaves perennial.* Laureola.

2. *Daphne sempervirens.* *Evergreen daphne.*
Flowers racemose; *raceme* axillary, drooping, 4 to 6-flowered; *leaves* lanceolate, bald.

Laureola, *Raii Syn.* 465; *Ger. em.* 1404; *Park.* 205, 1.
Daphne Laureola, *Lin. S. P.* 510.
Thymelea Laureola, *All. Ped.* 484.
Daphne major, *Lamarck Fl. Fr.* 3, 221.
Daphne sempervirens, *Salisb. Prod.* 281.
Spurge laurel. Laurel. Lowry.

Coppices and fields; shrubby; March.
Stem round, 3 feet high, leafy at top; *branches* few; *leaves* drooping, pale green, crowded; *flowers* green; *drupe* black.—Bark of the root useful in rheumatism, fevers, and worms; 10 gr. is a brisk and severe purge for a strong adult: this and the whole plant is very acrimonious.

C. *Perigonium not separable into 2 laminæ; flowers terminal, in bundles, coloured; leaves perennial.* Cneorum.

3. *Daphne prostrata.* *Trailing daphne.*
Flowers panicled, terminal, sessile; *leaves* lanceolate, naked, mucronate.

Cneorum Matthioli, *Ger. em.* 1596, 4; *Park.* 201, 2.
Daphne Cneorum, *Lin. S. P.* 511.
Thymælea Cneorum, *Allioni Pedem.* 487.
Daphne prostrata, *Salisb. Prod.* 281.
Rock rose. Dwarf oleander.

Mountains of Wales; shrubby; May.
Stem woody, trailing; *leaves* crowded; *flowers* reddish, odorous; *drupe* juicelesss.

Fam. XV. 15. POLYGONEÆ.

Perigonium 1-leafed, free, 4 or 6-cut, often coloured, persistent; *æstivation* imbricate; *stamens* definite, equal in number to the lobes of the perigonium and styles, inserted at the base; *anthers* 2-celled, cells opening longitudinally; *ovary* 1, free; ovule 1, upright; *styles* and *stigmata* 2 or 3; *utriculus* dry, hard, crustaceous, (the-

cidium) naked, or joined to the perigonium; *perisperm* farinaceous, rarely nearly wanting; *corculum* inverse, lateral, rarely central; *plumula* inconspicuous; *radicle* above.—*Stem* herbaceous, rarely shrubby; *leaves* alternate, sheathing at their base, or with an intrafoliaceous adnate sheath; younger leaves revolute beneath; *flowers* hermaphrodite, rarely unisexual, spiked or racemose.

Perigonium 4 *or* 8-*parted, not falling off.*

Flowers spiked, terminal ..... BISTORTA. 33.
Flowers spiked or panicled; spikes many PERSICARIA. 34.
Flowers axillary ..... POLYGONUM. 35.
Flowers corymbose; *thecidium* 3-sided FAGOPYRUM. 36.

Perigonium 4 *or* 6-*sepaled, inner ones persistent, outer reflexed.*

Stigmata 3; *corculum* lateral;
inner sepales tubercular at the base ..... LAPATHUM. 37.
Stigmata 3; *corculum* lateral;
inner sepales not tubercular at the base .... ACETOSA. 38.
Stigmata 2; *corculum* central;
inner sepales not tubercular at the base ..... OXYRIA. 39.

I. 33. BISTORTA. *Snakeweed.*

Perigonium 5-parted, persistent; *stamens* 8; 3 opposite and 5 interposed; *styles* and *stigmata* 3; *thecidium* 3-angular; *corculum* lateral.—*Rhizoma* tortuous; *stem* simple; *ocreæ* 2-valved, 2-flowered; *flowers* spiked; spike solitary, terminal.

1. *Bistorta major.* *Great snakeweed.*

Leaves ovate, waved; radical leaves decurrent into a petiole; *spike* dense, obtuse.

Bistorta major, *Raii Syn.* 147, 1; *Ger. em.* 399, 1.
Bistorta major vulgaris, *Park.* 391.
Polygonum Bistorta, *Lin. S. P.* 516.
Polygonum amœnum, *Salisb. Prod.* 258.
Bistort. Oyster loit. Passions, Cheshire. *Patience dock*, Manchester.

Fields and pastures; perennial; May and June.

Stem 18 in. high; *leaves* beneath, glaucous, veined; *spike* erect, many-flowered; *flowers* pedicelled.—Young shoots eaten as a potherb; root strongly astringent, used also in tanning leather.

2. *Bistorta vivipara.* *Childing snakeweed.*
Leaves lanceolate, margin revolute; *spike* linear; *flowers* often gemmiparous.

Bistorta minor, *Raii Syn.* 147, 2; *Ger. em.* 399, 2.
Bistorta minor nostras, *Park.* 392.
Polygonum viviparum, *Lin. S. P.* 516.
Small bistort. Small snakeweed.

Fields and pastures; perennial; June and July.
Stem 9 in. high; *spike* obtuse; *flowers* rosy; lower flowers bulbiferous.

β. *alpina.* *Radical leaves* roundish, minutely serrated.

Bistorta minima Alpina, foliis imis subrotundis et minutissime serratis, *Raii Syn.* 147, 3.
Bistorta Alpina pumila varia, *Park.* 392.

II. 34. PERSICARIA. Pliny. *Peachwort.*
Perigonium 3 to 5-parted, persistent; *stamens* 5 to 7: *filaments* connected by a gland, 3 or 4 at the sinus of the lobes, the others opposite to the sides of the ovary; *styles* 2; *stigmata* 2, blunt; *thecidium* ovate, compressed; *corculum* lateral; *cotyledons* accumbent. — *Stem* much branched; *ocreæ* 1 or 2-valved, 2 or 3-flowered; *flowers* spiked; *spike* terminal or axillary.

1. *Persicaria amphibia.* *Amphibious peachwort.*
Leaves lanceolate, acute, serrulate, bald, heartshape at bottom.

Persicaria salicis folio perennis, potamogiton angustifolium dicta, *Raii Syn.* 143, 9.
Potamogiton angustifolium, *Ger. em.* 821, 2.
Fontalis major longifolia, *Park.* 1254, 1 α.
Polygonum amphibium, *Lin. S. P.* 517.
Narrow-leaved pondweed.

Watery places; perennial; July and August.
Stem floating; *stipules* entire; *leaves* pleasant green, glossy, edge aculeated; *flowers* pedicelled; *stamens* shorter than the lobes of the perigonium.

β. *terrestris.* *Stem* erect; *leaves* dark, rough; *stamens* longer than the lobes of the perigonium.

2. *Persicaria acris.* *Sharp peachwort.*
Stem upright; *leaves* bald, smooth, lanceolate, spotless; *stipules* fringed; *spikes* filiform, drooping; *style* cloven.

Persicaria vulgaris acris, seu hydropiper, *Raii Syn.* 144, 1.
Persicaria vulgaris acris, seu minor, *Park.* 856.
Polygonum Hydropiper, *Lin. S. P.* 517.
Persicaria acris, *Lamarck Fl. Fr.* 234.
Polygonum gracile, *Salisb. Prod.* 259.
Arsesmart. Water-pepper.

Watery places; annual; September.

Stem 2 feet high, much branched; *upper part* of the joints swelled; *leaves* pale green; *flowers* reddish, glandular on the outer side.

3. *Persicaria pusilla.* *Dwarf peachwort.*

Stem rooting at bottom; *leaves* linear, lanceolate, flat, spotless; *stipules* fringed; *spikes* slender, threadshape, rather upright; *style* very slightly 2-cut.

Persicaria pusilla repens, *Raii Syn.* 145, 2; *Ger. em.* 446, 3; *Park.* 857.
Polygonum Persicaria β, *Lin. S. P.* 518.
Polygonum minus, *Huds. Fl. Angl. ed.* 1, 148.
Polygonum Hydropiper β, *Huds. Fl. Angl. ed.* 2, 170.
Persicaria pusilla, *Lamarck Fl. Fr.* 235.
Polygonum strictum, *Allioni Ped.* 2051.
Polygonum intermedium, *Ehrh.*
Polygonum mite, *Schrank Bavar.* 1, 668.
Polygonum angustifolium, *Roth Germ.* 2, 453.
Small creeping arsesmart.

Damp sandy places; annual; September.

Stems many, above erect, 9 in. high, slightly branched; *spikes* reddish; *flowers* not glandular on the outer side.

4. *Persicaria maculosa.* *Spotted peachwort.*

Stem erect; *leaves* ovate, lanceolate, often spotted, bald; *stipules* fringed; *spikes* ovate, oblong; *peduncles* smooth; *style* nearly 2-cut.

Persicaria maculosa, *Raii Syn.* 145; *Ger. em.* 445, 2.
Persicaria vulgaris mitis seu maculosa, *Park.* 856.
Polygonum Persicaria, *Lin. S. P.* 518.
Polygonum nudicaule, *Salisb. Prod.* 259.
Dead arsesmart.

Damp places; annual; July and August.

Stem 3 feet high, alternately branched; *leaves* spreading, deflexed; *spike* upright, rose-red.

β. *argentea.* *Leaves* not spotted, silver coloured.

Polygonum folio salicis alba vulgaris, *Raii Syn.* 145, 7.
Silver arsesmart, *Petiver Herb. Brit.* 3, 9.

5. *Persicaria incana.* *Grey peachwort.*

Stem ascending; *leaves* oblong, lanceolate, spotted, beneath pubescent; *stipules* fringed; *peduncles* smooth; *spikes* oblong, erect.

Persicaria folio subtus incano, *Dillen in Raii Syn.* 145, 5.
Polygonum incana, *Willd. Sp. Pl.* 446.
Polygonum tomentosum, *Schrank Bav.* 1, 669.
Polygonum Persicaria β, *Smith Fl. Brit.* 424.
Polygonum turgidum, *Theuil. Par.* 2, 199.
Polygonum scabrum, *Moench Meth.* 629.
Water pepper.

Corn-fields; annual; July.

Stem 18 in. high; *leaves* spread; *spikes* reddish.—*Plant* acrid, like pepper.

6. *Persicaria lapathifolia.* *Dockleaved peachwort.*

Stem patulous; *leaves* ovate, lanceolate, bald; *stipules* not fringed; *peduncles* rough, glandular; *spikes* ovate, erect, becoming drooping; *thecidium* compressed, concave on each side; *style* 2-lobed.

Hydropiper, *Ger. em.* 445, 1.
Persicaria mitis major, foliis pallidioribus, *Raii Syn.* 145, 6.
Polygonum lapathifolium, *Lin. S. P.* 517.
Polygonum pallidum, *With. Bot. Arr.* 381.
Polygonum Persicaria ζ, *Huds. Fl. Angl.* 170.
Polygonum Pennsylvanicum, *Curt. Fl. Lond.*

Dunghills and cornfields; annual; July and August.

Stem upright, 3 feet high; *leaves* pale green, mealy; upper leaves glandular; *spike* thick, ovate.

β. *rubra.* *Stem* and *flower* red.

7. *Persicaria maculata.* *Spotted peachwort.*

Stem patulous, spotted with red; *leaves* ovate, lanceolate; beneath bald, whitish; *stipules* not fringed; *peduncles* rough, glandular; *spikes* oblong, slender; *style* 2-lobed.

Persicaria latifolia geniculata, caulibus maculatis, *Dillen in Raii Syn.* 145, 8.
Polygonum Persicaria, η, δ, *Huds. Fl. Angl.*
Polygonum pallidum β, *With Bot. Arr.*
Polygonum Pennsylvanicum, var. *Curtis Fl. Lond.*
Polygonum lapathifolium γ, *Smith Fl. Brit.* 425.

Ditches and watery places; annual; September.

Upper leaves smooth, dotted beneath; *lower leaves* blueish white, downy, not dotted; *spikes* slender, whitish green, becoming reddish.

8. *Persicaria salicifolia.* *Willow-leaved peachwort.*

Stem decumbent; *leaves* ovate, lanceolate, hoary beneath; *stipules* not fringed; *peduncles* rough, glandular; *spike* ovate; *stamens* 6; *styles* 2.

Persicaria maculosa procumbens foliis subtus incanis, *Dillen in Raii Syn.* 146, 10.
Polygonum pallidum var. *With. Bot. Arr.* 473.
Polygonum Pennsylvanicum, var. *Curtis Fl. Lond.*
Polygonum lapathifolium δ, *Smith Fl. Brit.* 425.

Ditches and watery places; annual; September.

III. 35. POLYGONUM. Dioscorides. *Knotgrass.*

Perigonium 5-parted, persisting; *stamens* 8; 5 opposite, 3 interposed, connected by a gland; *styles* and *stigmata* 3, very short; *thecidium* rounded; *corculum* lateral; *cotyledons* incumbent.—*Root* fibrous, slightly woody; *stem* procumbent, branchy; *leaves* alternate; *flowers* axillary; *ocreæ* cylindrical, 3 or 4-flowered.

Polygonum aviculare. *Bird knotgrass.*

Leaves elliptical, lanceolate, edge rough; *stem* procumbent, herbaceous; *ocreæ* acute, few-ribbed.

Polygonum mas vulgare, *Raii Syn.* 146, 1; *Ger. em.* 565.
Polygonum mas vulgare majus, *Park.* 443, 1.
Polygonum aviculare, *Lin. S. P.* 519.
Polygonum latifolia, *Retz Observ.*
Swine's grass. Bird's tongue, North.

Roadsides and paths in gravelly soils; annual or biennial; April to October.

Stem divaricated, knotted at every joint; *leaves* ovate or lanceolate; *flowers* pink.—Herb given to sick swine that refuse their meat; seeds may be ground into a good flour for cakes, and are the principal food of small birds when wild.

β. *brevifolium.* *Leaves* oblong, a quarter of an inch long.
Polygonum brevi angustoque folio, *Raii Syn.* 146, 2.

γ. *angustifolium.* *Leaves* strapshape.
Polygonum oblongo angustoque folio, *Raii Syn.* 146, 3.

δ. *rotundifolium.* *Leaves* roundish, crowded.
Polygonum folio rotundo, *Dillen in Raii Syn.* 147, 4.

ε. *marinum.* *Stem* rather woody.
Polygonum marinum, *Raii Syn.* 147, 5. excluding his synonyms, which belong to Polygonum maritimum, Linn. a very different plant.

IV. 36. FAGOPYRUM. Theophrastus. *Buckwheat.*

Perigonium 5-parted, unequal, 2 inner small, 3 outer keeled, persisting; *stamens* 5 interposed and 3 opposite, with 5 nectariferous glands; *styles* 3; *stigmata* 3; *thecidium*

3-angular; *corculum* central; *cotyledon* foliaceous, transversely pleated.—*Root* fibrous; *stem* much branched, upright or twining; *leaves* heartshape-sagittate, or with the base cut in; *flowers* corymbose or panicled, axillary or terminal.

1. *Fagopyrum esculentum.* *Esculent buckwheat.*

Stem upright, flexuous, spineless; *leaves* heartshape, sagittate; *angles* of the thecidium equal, not sinuated.

Fegopyrum, *Raii Syn.* 144, 1.
Tragopyron, *Ger. em.* 89.
Tragopyrum, *Park.* 1141.
Polygonum Fagopyrum, *Lin. S. P.* 522.
Polygonum cereale, *Salisb. Prod.* 259.
French wheat. Branks. Bullimong.

Cultivated for its seeds, also as a green crop to plough in for manure, and to attract game to the place; sometimes wild by roadsides, but does not bear our winters well: annual; July to August.

Stem a foot high, smooth; *leaves* fleshy, the upper sessile; *flowers* purplish-white.—Seeds nutritive, make good crumpets; used also to feed poultry.

2. *Fagopyrum carinatum.* *Keeled buckwheat.*

Stem twining, smooth, angular; *leaves* cordate, sagittate; *ocreæ* truncated, not notched; *outer lobes* of the perigonium obtusely keeled.

Fegopyrum scandens sylvestre, *Raii Syn.* 144, 2.
Volubilis nigra, *Ger. em.* 863, 5.
Convolvulus minor atriplicis folio, *Park.* 171.
Polygonum Convolvulus, *Lin. S. P.* 522.
Polygonum infestum, *Salisb. Prod.* 259.
Helxine caule volubili, *Lin. Fl. Lapp.* 154.
Fagopyrum carinatum, *Moench. Meth.* 290.
Black bindweed.

Fields; annual; June to September.

Leaves pedicelled; *racemes* terminal, leafy; *flowers* in bundles, drooping.

3. *Fagopyrum membranaceum.* *Winged buckwheat.*

Stem twining, streaked; *leaves* triangular, sagittate-waved; *outer lobes* of the perigonium winged, wings membranaceous.

Polygonum dumetorum, *Lin. S. P.* 558.
Polygonum Convolvulus, *Stokes Bot. Mat. Med.* 2, 399.
Fagopyrum membranaceum, *Moench. Meth.* 290.

Fields and hedges; annual; June and September.

V. 37. LAPATHUM. Theophrastus. *Dock.*

Perigonium 6-parted, unequal; outer small, reflexed; inner larger, persistent, enclosing the thecidium, tubercular at the base: *stamens* 6; *styles* 3; *stigmata* 3, many-cut; *thecidium* 3-angular; *corculum* lateral, peripherical; *radicle* above.—*Root* fusiform, perennial; *herb* slightly acid; *stem* branched; joints swollen above; *leaves* lanceolate; *flowers* in half whirls, panicled; terminal or axillary; hermaphrodite or unisexual.

a. *Inner lobes of the perigonium not cut.*

1. *Lapathum aquaticum.* *Water dock.*

Leaves acute, rather glaucous; lower heartshape, lanceolate; upper lanceolate; *sepales* ovate, obsoletely tuberculated; tubercles becoming large, oblong, lanceolate.

Lapathum maximum aquaticum sive hydrolapathum, *Raii Syn.* 140, 1.
Hydrolapathum maximum, *Ger. em.* 389, 1.
Hydrolapathum majus, *Park.* 1225.
Rumex aquaticus, *Lin. S. P.* 479.
Rumex Britannicus, *Huds. Fl. Angl. ed.* 1, 135.
Rumex Hydrolapathum, *Huds. Fl. Angl. ed.* 2, 151.
Rumex paludosus, *Huds.* 154.
Rumex antiscorbuticus, *Salisb. Prod.* 258.
Great water-dock.

Ditches and river-sides; perennial; August.

Root thick; *stem* 5 feet high, upright; whirls near together; *sepales* ovate, veined, rarely slightly toothed.—Root antiscorbutic, and useful in chronic diseases from obstructions in the viscera; also a good tooth-powder.

2. *Lapathum crispum.* *Curl-leaf dock.*

Leaves lanceolate, waved, acute; *sepales* ovate, all tuberculate: tubercles large, ovate, gibbous.

Lapathum folio acuto crispo, *Raii Syn.* 141, 3.
Rumex crispus, *Lin. S. P.* 476.

Road-sides and pastures; perennial; June and July.

Root yellowish; *stem* angular; *racemes* closely leafed at the bottom.

3. *Lapathum conglomeratus.* *Balled dock.*

Lower leaves heartshape, lanceolate; *upper* lanceolate; *branches* spreading; *whirls* distant; *sepales* linear, obtuse, all tubercled.

Rumex paludosus, *Aiton Hort. Kew.* 482.
Rumex conglomeratus, *Roth Germ.* 1, 422.
Rumex Nemolapathum.

Damp woods and bogs; perennial; July.
Stem erect; *branches* diffused; *leaves* ovate, lanceolate; *whirls* remote, glomerate.

4. *Lapathum sanguineum.* *Bloody dock.*
Lower leaves heartshape, lanceolate; *upper* lanceolate, waved; *ribs* coloured; *sepales* oblong, often tubercled.

Lapathum folio acuto rubente, *Raii Syn.* 142, 11.
Lapathum sativum sanguineum, *Ger. em.* 390, 5.
Rumex sanguineus, *Lin. S. P.* 476.
Lapathum sanguineum, *Lamarck Fl. Fr.* 3, 2.
Bloodwort.

Woods and waysides; perennial; July.
Leaves petioled, veined; *racemes* leafless; *thecidium* small; —Leaves laxative; seeds astringent.

5. *Lapathum viride.* *Green dock.*
Lower leaves heartshape, lanceolate; *upper* lanceolate, veined; ribs green; *sepales* oblong, tubercled.

Lapathum viride, *Dillen in Raii Syn.* 141, 6.
Rumex acutus, *Curtis Fl. Lond.*
Rumex acutus β, *Huds. Fl. Ang.* 155.
Rumex viridis, *Sibthorp Fl. Oxon.* 118.

Sandy places; perennial; July.

b. *Inner valve of the perigonium toothed.*

6. *Lapathum acutum.* *Sharp-pointed dock.*
Leaves heartshape, oblong, pointed; *stem* smooth; *racemes* leafy, divaricated, long; *valves* oblong, rather toothed, tubercled.

Lapathum acutum, *Raii Syn.* 142, 7; *Ger. em.* 388, 1.
Lapathum acutum majus, *Park.* 1224, 1.
Rumex acutus, *Lin. S. P.* 478.

Fields and watery places; perennial; July.
Root dyes different shades from straw to olive green.

β. *minimum.* *Plant* small.

Lapathum acutum minimum, *Dillen in Raii Syn.* 141, 5; *Ger. em.* 388, 2; *Park.* 1224.

7. *Lapathum obtusifolium.* *Blunt-leaved dock.*
Radical leaves heartshape, oblong, obtuse; *upper leaves* ovate, lanceolate, acute; *stem* roughish; *racemes* leafless, linear, oblong; *valves* tubercled, toothed; teeth awlshape.

Lapathum vulgare, folio obtuso, *Raii Syn.* 141, 2.
Lapathum sylvestre folio minus acuto, *Ger. em.* 388, 3.
Lapathum sylvestre vulgatius, *Park.* 1225.
Rumex obtusifolius, *Lin. S. P.* 478.
Lapathum obtusifolium, *Moench Meth.* 256.
Lapathum sylvestre α, *Lamarck Fl. Fr.* 3, 4.

Road-sides and ruins; perennial; July and August.
Root yellowish; *radical leaves* very large, exceeding grateful to deer.

8. *Lapathum pulchrum.* *Handsome dock.*
Radical leaves panduræform; *upper leaves* oblong; *stem* divaricating, smooth; *racemes* leafy; *valves* deltoid, veined, toothed, tubercled.

Lapathum pulchrum Bononiense sinuatum, *Raii Syn.* 142, 8.
Rumex pulcher, *Lin. S. P.* 477.
Lapathum sinuatum, *Lamarck Fl. Fr.* 3, 5.
Fiddle dock.

Barren sandy places and roadsides; perennial; August.
Stem procumbent; *branches* long, inclined; *leaves* smooth.

9. *Lapathum aureum.* *Golden dock.*
Leaves linear; *racemes* spikelike, whirls crowded; *valves* deltoid, tubercled, 4-toothed; teeth bristlelike, longer than the valves.

Lapathum folio acuto flore aureo, *Raii Syn.* 142, 9.
Rumex maritimus, *Lin. S. P.* 478.
Rumex aureus, *With. Bot. Arr.* 356.
Lapathum minus, *Lamarck Fl. Fr.* 3, 4.
Rumex Anthoxanthum, *Salisb. Prod.* 52.

Bogs and watery places; perennial; July and August.
Stem furrowed, rough; *leaves* flat, slender; *flowers* golden yellow.

10. *Lapathum palustre.* *Marsh dock.*
Leaves linear, lanceolate; *racemes* interrupted; whirls distant; *valves* lanceolate, tuberculate, toothed at the bottom; teeth bristlelike, shorter than the valves.

Lapathum aureum, *Dillen in Raii Syn.* 142, 10.
Hydrolapathum minus, *Ger. em.* 389, 2; *Park.* 1225.
Rumex maritimus β, *Huds. Fl. Angl.* 155.
Rumex maritimus, *Curtis Fl. Lond.*
Rumex palustris, *Smith Fl. Brit.* 394.
Golden dock.

Bogs and damp places; perennial; July and August.
Stem rough; *radical leaves* large, acute; *whirls* leafy.

VI. 38. ACETOSA. Brunsfel. *Sorrel.*

Perigonium 6-parted; 3 inner lobes persisting, girding the fruit, not tubercled at bottom; 3 outer smaller, reflected; *stamens* 6; *styles* 3; *stigmata* 3; *thecidium* 3-angular; *corculum* lateral, peripherical.—*Root* fibrous or creeping; *herb* acid; *flowers* in half whirls, racemose or panicled, hermaphrodite or unisexual.

1. *Acetosa pratensis.* *Meadow sorrel.*

Leaves oblong, sagittate, with barbs turned backwards; *root* fibrous; *flowers* unisexual; *valves* not cut.

Acetosa pratensis, *C. Bauh. Pin.* 114; *Miller Dict.*
Lapathum acetosum vulgare, *Raii Syn.* 143, 12.
Oxalis, sive Acetosa, *Ger. em.* 396, 1.
Acetosa vulgaris, *Park.* 742.
Rumex Acetosa, *Lin. S. P.* 481.
Lapathum acetosum, *Scopoli Carn.* 2, 438.
Common sorrel. Garden sorrel. Sorrel dock.

Fields and pastures; perennial; June.

Stem leafy, 3 feet high; *radical leaves* petiolate, blunt; upper sessile, pointed; *thecidium* shorter than the valves. —Root dried gives a beautiful red colour to water, as if changed to wine; leaves acid, used in salads and sauces; expressed juice cleared by settling, and evaporated, yields an essential salt, sold for salt of lemons, and used to take iron-moulds out of linen.

β. *Alpina.* *Herb* much larger; *thecidium* longer than the valves.

Lapathum α. Acetosa montana maxima C. Bauhini, *Dillen in Raii Syn.* 143, 12.

2. *Acetosa repens.* *Creeping sorrel.*

Leaves lanceolate, hastate, barbs acute, recurved; *rhizoma* creeping; *flowers* unisexual, valves not cut.

Lapathum acetosum repens lanceolatum, *Raii Syn.* 143, 13.
Oxalis tenuifolia, *Ger. em.* 379.
Acetosa minor lanceolata, *Park.* 744.
Rumex Acetosella, *Lin. S. P.* 481.
Acetosa tenuifolia, *Moench Meth.* 357.
Rumex infestum, *Salisb. Prod.* 258.
Sheep's sorrel. Sheep's dock.

Barren sandy places; perennial; June and July.

Stem 12 inches high; *radical leaves* hastate; *stem leaves* lanceolate or hastate.

3. *Acetosa scutata.* *Shielded sorrel.*

Leaves heartshape, hastate; barbs reflex, diverging; *stems* roundish; *flowers* hermaphrodite, valves not cut.

Oxalis Franca seu Romana, *Ger. em.* 397, 4.
Rumex scutatus, *Lin. S. P.* 481.
Roman sorrel. French sorrel. Round-leaved sorrel.

Stony, mountainous places; perennial; June and July: also cultivated.

Stem and *leaves* glaucous.

VII. 39. OXYRIA. Hill. *Welsh-sorrel.*

Perigonium 4-parted; 2 inner lobes larger, erect, adnate to the seed, not granuliferous at bottom; 2 outer smaller, reflexed; *stamens* 6; *styles* 2, distant; *stigmata* 2, pencil-shape; *thecidium* rhomboidal, 2 outer angles winged; *corculum* central, straight; *cotyledones* linear, incumbent; radicle above.—*Root* perennial; *leaves* mostly radical, petiolate; *flowers* in bundles, panicled, hermaphrodite.

Oxyria rotundifolia. *Round-leaved Welsh-sorrel.*

Leaves orbiculate, retuse or nicked; *valves* oval, not toothed.

Acetosa rotundifolia hortensis, *Raii Cat. Cant.* 1, 6.
Lapathum q. Acetosa rotundifolia repens Eboracensis folio in medio deliquium patiente Morison, *Raii Syn.* 143, 14.
Acetosa Cambro-Britannica montana, *Park.* 745.
Rumex digynus, *Lin. S. P.* 480.
Acetosa digyna, *Miller Dict.*
Lapathum digynum, *Lamarck Fl. Fr.* 3, 6.

Alpine places; perennial; June.

Stem a foot high, upright, rather naked; *leaves* pale green, ribbed.

Fam. XVI. 16. CHENOPODEÆ. De Candolle.
Atriplices, Jussieu.

Perigonium free, 1-leafed, deeply divided, persisting, rarely tubular at bottom; *æstivation* imbricate; *stamens* inserted at the base of the perigonium, opposite the lobes, and as many or fewer than the lobes; *ovary* 1, free, one-seeded; *ovule* affixed at the base, upright or inverted; *style* divided, 2 or 4-cut; *stigmata* undivided; *utriculus* membranaceous, rarely fleshy; *embryo* curved, or spiral, round the farinaceous perisperm; *radicle* at the hilum, above or

below; *plumula* scarcely visible.—Herbs or undershrubs; *leaves* alternate, rarely opposite; *stipulæ* or *sheaths* none; *flowers* small, greenish, rarely unisexual.

Stamens 1 *or* 2.

Perigonium not cut; *utriculus* membranaceous ..... SALICORNIA. 46.
Perigonium 3-parted; *utriculus* fleshy .... BLITUM. 40.

Stamens 5; *perigonium not enlarging after flowering.*

Utriculus half-adherent ..... BETA. 41.
Utriculus free ..... CHENOPODIUM. 44.

Stamens 5; *perigonium enlarging after flowering.*

Spermodermis double; *perigonium* 3 or 4-cut ..... SPINACHIA. 42.
Spermodermis double; *perigonium* in female flowers 2-leaved, compressed ..... ATRIPLEX. 43.
Spermodermis simple; *seed* horizontal; *corculum* snail-like ..... SALSOLA. 45.

I. 40. BLITUM. Theophrastus. *Blite.*

Perigonium 3-cut, coloured; *stamen* 1; *ovary* above; *styles* 2; *utriculus* fleshy; *seed* lenticular; spermodermis double, the outer crustaceous; *corculum* annular.—*Flowers* glomerate; *fruit* like a strawberry, axillary or terminal.

Blitum virgatum.
Heads spread, lateral.
Blitum virgatum, *Lin. S. P.* 7.
Dunghills, but scarcely a native; annual; July.

II. 41. BETA. Pliny. *Beet.*

Perigonium 3-parted, slightly adherent at bottom to the ovary; *stamens* 5; *styles* 2; *utriculus* depressed, immersed in the perigonium; *seed* horizontal; *spermodermis* double, the outer coriaceous; *corculum* annular.—*Root* fusiform, fleshy; *stem* furrowed; *glomerules* 2 to 4-flowered, sessile, axillary; *bracteæ* 2 or 3 to each flower.

1. *Beta maritima.* *Sea beet.*

Stem prostrate at bottom; *lower leaves* triangular, petiolate; *flowers* solitary or in pairs; *lobes* of the perigonium quite entire.

Beta sylvestris maritima, *Raii Syn.* 157; *Park.* 750.
Beta maritima, *Lin. S. P.* 322.

Sea-shores; perennial; August.

Root black, internally white; *stems* many, much branched at the top; *flowers* racemose.

2. *Beta vulgaris.* *Common beet.*

Stem erect; *leaves* ovate; *flowers* 3 or 4 together.

Beta alba, *Ger. em.* 318, 1.
Beta, *Park.* 487.
Beta vulgaris, *Lin. S. P.* 322.
Beta esculenta, *Salisb. Prod.* 152.
Beta cicla, *Murray Syst. Nat.* 262.
Beta hortensis, *Mill. Dict.* 2, var.

Cultivated; biennial; July and August.

Leaves green.—Roots saccharine, very nutritive, used as food for man and beast, and also to manufacture sugar, of the same kind as cane sugar.

β. *rubricaulis.* *Leaves* green with red veins; *stem* and *branches* red.

Beta rubra, *Ger. em.* 318, 2.
Beta vulgaris 3, var. *Miller Dict.*

γ. *rubra.* *Leaves* red.

Beta rubra Romana, *Ger. em.* 319, 3.
Beta vulgaris α, *Lin. S. P.* 322.
Beta vulgaris 3, *Miller Dict.*

δ. *albo-rubens.* *Root* tuberous, red, internally white.

Beta hybrida, *Salisb. W.* 15.
Root of scarcity. *Mangel wurzel.*

ε. *raposa.* *Root* tuberous, red throughout.

Beta vulgaris γ, *Lin. S. P.* 322.
Beta raposa, *Park.* 489.
Turnep-rooted beet.

ζ. *lutea.* *Root* yellow.

Beta vulgaris δ, *Lin. S. P.* 322.

III. 42. SPINACHIA. *Spinage.*

Flowers unisexual.—MALE. *Perigonium* 5-parted; *stamens* 5.—FEMALE. *Perigonium* 2 or 4-parted; *styles* 4; *utriculus* upright, in the hardened and enclosing perigonium; *spermodermis* simple, membranaceous; corculum annular.—*Flowers* glomerate, axillary.

1. *Spinachia spinosa.* *Prickly spinage.*
Leaves sagittate; *fruit* horned, sessile.
Spinachia, *Ger. em.* 330; *Park.* 496.
Spinachia oleracea, *Lin. S. P.* 1456.
Spinachia spinosa, *De Cand. Fl. Gall.*
Spinachia sessili-flora spinosa, *Stokes Bot. Mat. Med.* 4, 537.
Winter spinage.
Cultivated; biennial; April to June.
Leaves used as a potherb, laxative.

2. *Spinachia inermis.* *Smooth spinage.*
Leaves oblong, ovate; *fruit* spineless, sessile.
Spinachia oleracea β, *Lin. S. P.* 1456.
Spinachia glabra, *Miller Dict.*
Spinachia sessiliflora inermis, *Stokes B. M. M.* 4, 537.
Spinachia inermis, *De Cand. Fl. Gall.* 2243.
Round-leaved spinage.
Cultivated; annual; April to June.
Leaves used as a potherb, laxative.

IV. 43. ATRIPLEX. Pliny. *Orache.*
Flowers polygamous. — HERMAPHRODITE. *Perigonium* 5-parted; *stamens* 5; *styles* 2, rarely perfect; *utriculus* depressed.—FEMALE. *Perigonium* 2-cut; *style* 2-cut; *utriculus* compressed by the enlarging persistent perigonium; *seed* upright; spermodermis double, the outer crustaceous; corculum annular; radicle above.—*Leaves* alternate; rarely opposite; *stem* rarely shrubby; *flowers* glomerate, panicled.

Leaves opposite; stem shrubby. Halimus.

1. *Atriplex portulacoides.* *Purslane orache.*
Stem shrubby, diffused; *leaves* opposite, obovate, lanceolate, not cut, powdery, glaucous.
Atriplex maritima fruticosa, Halimus et Portulaca marina dicta, angustifolia, *Raii Syn.* 153, 11.
Halimus vulgaris, sive portulaca marina, *Ger. em.* 523, 3.
Portulaca marina nostras, *Park.* 724.
Atriplex portulacoides, *Lin. S. P.* 1493.
Common sea-purslane.
Sea-shore; shrubby; July and August.
Root woody; *stem* 18 in. high, 4-sided; *flowers* yellowish, monoicous, female deltoid.

Leaves alternate; stem herbaceous. Atriplex.

2. *Atriplex laciniata.* *Jagged orache.*
Stem herbaceous, diffused, spreading, pubescent at top; *leaves* deltoid, sinuate, toothed, silvery underneath.

Atriplex maritima, *Raii Syn.* 152, 8.
Atriplex marina, *Ger. em.* 325, 4.
Atriplex marina repens, *Park.* 758.
Atriplex laciniata, *Lin. S. P.* 1494.
Jagged sea-orache.

Sea-shores; annual; July.

Root fibrous; *stem* spreading; *leaves* unequally toothed, sinuated; *hermaphrodite flowers* spiked, conglomerate, small, axillary, pedicelled, crowded; *fruit* 3-ribbed, toothed.

β. *truncata.* *Leaves* angular, much sinuated.

Atriplex maritima nostras, procerior, foliis angulosis, incanis admodum sinuatis, *Dillen in Raii Syn.* 152, 6.

3. *Atriplex patula.* *Spreading orache.*

Stem herbaceous, spreading; *leaves* deltoid, lanceolate, rather hastate; *fruit* thorny on the disc.

Atriplex sylvestris, folio hastato sive deltoide, *Raii Syn.* 151, 1.
Atriplex sylvestris vulgaris, *Ger. em.* 326, 5.
Atriplex patula, *Lin. S. P.* 1494.
Atriplex hastata, *Huds. Fl. Ang.* 443.
Delt sea-orache. Common wild orach.

Ruins and common fields; annual; July and August.

Root fibrous; *stem* much branched, upright; *leaves* alternate; lower leaves deltoid; upper slender, lanceolate; *racemes* leafy; *fruit* deltoid, rhomboid; *seed* dotted.—Herb used as a pot-herb.

β. *Stem* procumbent, reddish; *leaves* less hoary.

Atriplex maritima perennis folio deltoide seu triangulari minus incano, *Dillen in Raii Syn.* 152, 5.

γ. *aurita.* *Stem* procumbent, reddish; *leaves* fleshy, eared at bottom, scarcely toothed, reddish.

Atriplex maritima ad foliorum basin auriculata procumbens, et ne vix sinuata, *Dillen in Raii Syn.* 152, 7.

Sandy sea-shores.

4. *Atriplex angustifolia.* *Narrow-leaf orache.*

Stem herbaceous; *leaves* lanceolate, diverging, not cut; lower leaves somewhat hastate; *fruit* hastate, smoothish.

Atriplex sylvestris angustifolia, *Raii Syn.* 151, 2; *Ger. em.* 326, 7; *Park.* 748.
Atriplex patula, *Huds. Fl. Angl.* 443.
Atriplex angustifolia, *Smith Fl. Brit.* 1092.
Spear orache.

Fields and ruins; annual; June to August.

Petioles short; *leaves* lanceolate, horizontal; lowermost broad, sometimes hastate; *apex* of the fruit long, acute; edge not cut.—Seeds useful in dysentery, emetic.

5. *Atriplex erecta.* *Upright orache.*

Stem herbaceous, upright; *leaves* ovate, lanceolate; lower leaves sinuate; *fruit* deltoid, acute, muricated all over.

Atriplex angustifolia lacinata, *Dillen in Raii Syn.* 152, 4.
Atriplex erecta, *Huds. Fl. Angl. ed.* 1, 376.
Atriplex patula, *Huds. Fl. Angl. ed.* 2, 444.

Ruins; annual; August.

Stem much branched; *leaves* rather powdery, pointed; upper leaves entire; lower indented; *racemes* terminal, nearly leafless; *fruit* small.

6. *Atriplex littoralis.* *Shore orache.*

Stem herbaceous, upright; *leaves* linear; *fruit* ovate, pointed, muricated, indented.

Atriplex angustissimo et longissimo folio, *Dillen in Raii Syn.* 153, 12 *.
Atriplex maritima angustifolia, obtusiori folio, *Dillen in Raii Syn.* 153, 12 **.
Atriplex maritima scopariæ folio, *Dillen in Raii Syn.* 153, 12.
Atriplex littoralis, *Lin. S. P.* 1494.
Grass sea-orache.

Muddy sea-shores; annual; August and September.

Stem much branched; *leaves* not cut, powdery underneath; *spike* ovate, cylindrical, nearly leafless.

β. *serrata.* *Leaves* serrated.

Atriplex angustifolia maritima dentata, *Raii Syn.* 152, 3.
Atriplex serrata, *Huds. Fl. Angl.* 444.
Atriplex marina, *Pers. Syn.* 1, 293.
Jagged long orache.

7. *Atriplex pedunculata.* *Footstalked orache.*

Stem herbaceous, flexuous, diverging; *leaves* obovate, very entire; *female flowers* peduncled, wedgeshape.

Atriplex marina semine lato, *Raii Syn.* 153, 10.
Atriplex pedunculata, *Lin. S. P.* 1495.
Heart sea-purslane.

Muddy sea-shores; annual; August and September.

Herb powdery, woolly; *stem* 9 in. high, angular; *leaves* spreading, not cut; *flowers* terminal, crowded; female flowers deflexed, 3-lobed.

β. *humilis.* *Stem* shorter; *plant* more diffused.

Atriplex maritima nostras, ocymi minoris folio, *Raii Syn.* 153, 9.

V. 44. CHENOPODIUM. Pliny. *Goosefoot.*

Perigonium 5-parted, persisting, not enlarging after flowering; *stamens* 5; *styles* 2-cut; *stigmata* 2 or 4; *utricula* membranaceous, depressed, girt by the perigonium;

seed orbicular, horizontal; spermodermis double, the outer crustaceous; corculum annular; radicle horizontal, centrifugal.—*Herb* succulent, mostly powdery; *flowers* glomerate, panicled.

a. *Leaves ovate or rhomboidal; often toothed or lobed; flowers not bracteated.*

1. *Chenopodium spinacifolium.* *Spinage-leaved goosefoot.*

Leaves triangular, sagittate, not cut; *spike* compound, terminal, erect, leafless.

Blitum sylvestre, q. Blitum perenne Bonus Henricus dictum, *Raii Syn.* 156, 45.

Bonus Henricus, *Ger. em.* 329, 1.

Lapathum unctuosum, sive Bonus Henricus, *Park.* 1225.

Chenopodium Bonus Henricus, *Lin. S. P.* 318.

All good. *Good King Harry*, Cambridgeshire. *English Mercury.*

Ruins and waysides, also cultivated; perennial; May to August.

Root much branched; *stem* unctuous, powdery; *leaves* petioled, powdery underneath; *flowers* crowded, powdery, many only female: *perigonium* dilated, erose; *styles* pubescent.—Herb laxative, eaten as a potherb; young shoots peeled and boiled eat like asparagus.

2. *Chenopodium urbicum.* *Town goosefoot.*

Leaves triangular, rather toothed; *racemes* crowded, very long, stiff, approaching the stem, nearly leafless.

Blitum sylvestre, q. Chenopodium erectum foliis triangularibus dentatis, spicis e foliorum alis plurimis longis, erectis, tenuibus, *Dillen in Raii Syn.* 155, 11.

Chenopodium urbicum, *Lin. S. P.* 318.

Broad-pointed blite.

Dunghills; annual; August and September.

Stem angular; *racemes* axillary; *seeds* much larger than those of chenopodium rubrum.

3. *Chenopodrum rubrum.* *Red goosefoot.*

Leaves rhomboidal, triangular, sinuate, toothed; *racemes* erect, compound, rather leafy, shorter than the stem.

Blitum sylvestre, q. Blitum Pes anserinus dictum, *Raii Syn.* 154, 2.

Atriplex sylvestris latifolia, sive pes anserinus, *Ger. em.* 328, 1; *Park.* 749.

Chenopodium rubrum, *Lin. S. P.* 318.

Goosefoot. *Sowbane.* *Wild orach.*

Dunghills and ruins; annual; August.

Leaves thick, shining, deeply toothed; *racemes* rather spreading, reddish; *seed* very minute.

4. *Chenopodium botryoides.* *Bunch-of-grapes goosefoot.*
Leaves triangular, rather toothed, the upper rather blunt; *racemes* upright, compound, rounded, leafless.

Blitum sylvestre, q. blito pes anserinus dicto similis, *Raii Syn.* 154, 4.
Chenopodium botryoides, *Engl. Bot.* 2247.

Sea-shores; annual; August.
Leaves small, fleshy; *flowers* reddish.

5. *Chenopodium murale.* *Wall goosefoot.*
Leaves ovate, shining, acute, unequally toothed; *racemes* very much branched, cymose, leafless; *stem* upright, spreading.

Blitum sylvestre, q. Blitum Pes anserinus dictum, acutiore folio, *Raii Syn.* 154, 3.
Atriplex sylvestris latifolia altera, *Ger. em.* 328; *Park.* 749.
Chenopodium murale, *Lin. S. P.* 318.

Ruins; annual; August.
Herb dark green, shining, fœtid; *leaves* triangular, ovate, teeth incurved, petioles long; *seed* minutely punctured.

6. *Chenopodium angulatum.* *Cornered goosefoot.*
Leaves heartshape, angular, toothed, pointed; *racemes* much branched, rather cymose, divaricating, leafless.

Blitum sylvestre, q. Chenopodium stramonii folio, *Raii Syn.* 154, 5.
Chenopodium hybridum, *Lin. S. P.* 319.
Chenopodium angulatum, *Lamarcke Enc. Bot.* 1, 194.
Maple Blite. *Maple-leaved goosefoot.*

Damp rubbish; annual; August.
Herb smooth, fœtid, slender; *leaves* large, light green; *seed* dotted.

7. *Chenopodium album.* *White goosefoot.*
Leaves rhomboidal, ovate, crowded, not cut at the bottom, the upper oblong, not cut; *racemes* branched, nearly leafless; *seed* smooth.

Blitum sylvestre, q. Atriplex sylvestris dictum, *Raii Syn.* 154, 1.
Chenopodium album, *Lin. S. P.* 319.
Frost blite.

Dunghills, rubbish; annual; August.
Herb oily, powdery.

β. *rotundifolium.* *Leaves* roundish.

Blitum (sylvestre) folio subrotundo, *Dillen in Raii Syn.* 155, 10.

γ. *viride.* *Herb* green; *leaves* narrow, scarcely cut; *racemes* loose.

Atriplex sylvestris altera, *Ger. em.* 326, 6.
Chenopodium viride, *Lin. S. P.* 319.
Chenopodium album β, *Huds. Fl. Angl.* 106.

δ. *integerrimum.* *Leaves* not in the least cut.

Blitum sylvestre, q. Chenopodium foliis integris racemosum Dale, *Dillen in Raii Syn.* 155, 12.

ε. *incrassatum.* *Leaves* thick, blunt.

Blitum sylvestre, q. Chenopodium crasso et obtuso oleæ folio, *Dillen in Raii Syn.* 156, 13.

8. *Chenopodium ficifolia.* *Fig-leaved goosefoot.*

Leaves hastate, sinuate, erose, not cut behind; the upper oblong, not cut; *seeds* dotted.

Blitum (sylvestre) ficus folio, *Dillen in Raii Syn.* 155, 9.
Chenopodium serotinum, *Hads. Fl. Angl.* 106.
Chenopodium viride, *Curt. Fl. Lond.*
Buddle's fig-blite.

Dunghill and rubbish; annual; August.

Herb green; *axillæ* of the branches purplish.

β. *erectum.* *Plant* upright; *leaves* like those of chrysanthemum segetum.

Blitum sylvestre, q. Chenopodium erectum chrysanthemi segetum folio, *Dillen in Raii Syn.* 155, 8.

9. *Chenopodium glaucum.* *Seagreen goosefoot.*

Leaves oblong, sinuate, repand, glaucous underneath; *racemes* glomerate, leafless; *seeds* dotted.

Blitum sylvestre, q. Chenopodium angustifolium laciniatum minus, *Dillen in Raii Syn.* 155, 7.
Chenopodium glaucum, *Lin. S. P.* 320.
Oakleaved blite. Oaklcaved goosefoot.

Sandy rubbish; annual; August.

Plant diffuse; *leaves* green above; *racemes* short, lobed.

10. *Chenopodium olidum.* *Stinking goosefoot.*

Leaves rhomboidal, ovate, not in the least cut; *racemes* conglomerate.

Blitum (sylvestre) fœtidum, Vulvaria dictum, *Raii Syn.* 156, 14.
Atriplex olida, *Ger. em.* 327.
Atriplex olida, sive sylvestris fœtida, *Park.* 749.
Chenopodium Vulvaria, *Lin. S. P.* 320.
Chenopodium olidum, *Curtis Fl. Lond.*
Chenopodium fœtidum, *Lamarck Encyc. Meth.* 196.
Stinking orache.

Ruins, especially near the sea; annual; August.

Herb very fœtid, diffuse, prostrate, powdery, greyish.

11. *Chenopodium polyspermum.* *Many-seeded goosefoot.*

Leaves ovate, not cut; *stem* prostrate; *racemes* cymose, diverging, leafless.

Blitum sylvestre, q. chenopodium betæ folio Tournefortii, *Raii Syn.* 157, 18.
Atriplex sylvestris, sive Polyspermum, *Ger. em.* 325, 3.
Blitum polyspermon, *Park.* 753.
Chenopodium polyspermum, *Lin. S. P.* 321.
Wild orach. All-seed.

Rubbish and dunghills; annual; July and August.

Herb prostrate, dark green; *racemes* long, many-flowered, reddish; *seeds* kidneyshape, reddish, minutely dotted.

12. *Chenopodium acutifolium.* *Pointed-leaf goosefoot.*

Leaves ovate, pointed, not cut; *stem* upright; *racemes* somewhat cymose, long, leafless.

Chenopodium acutifolium, *Engl. Bot.* 1481.
Chenopodium polyspermum, *Curtis Fl. Lond.*

Rubbish and waste grounds; annual; July and August.

Herb nearly erect, paler than the preceding; *racemes* stiffer; *seeds* orbicular, blackish.

β. *dentatum.* *Leaves* with a large tooth on one or both sides.

b. *Leaves linear, not cut; bracteæ 2 or 3 to each flower.* Kali.

13. *Chenopodium maritimum.* *Sea goosefoot.*

Leaves bald, subulate, fleshy, half round; *flowers* glomerate, axillary, sessile.

Blitum (sylvestre) kali minus album dictum, *Raii Syn.* 156, 14.
Kali minus, *Ger. em.* 535.
Kali minus album, *Park.* 279.
Chenopodium maritimum, *Lin. S. P.* 321.
White glasswort.

Sea-shore and salt-marshes; annual; August.

Stem upright, branched, many, alternate; *bracteæ* 2; *style* 1; *stigmata* 3, pink; *seeds* shining, minutely striated. —An excellent potherb.

14. *Chenopodium fruticosum.* *Shrubby goosefoot.*

Leaves bald, fleshy, round, blunt, imbricate; *stem* shrubby, bald; *flowers* sessile, axillary, single.

Blitum (sylvestre) fruticosum minimum, Vermicularis frutex dictum *Raii Syn.* 156, 16.
Vermicularis frutex minor, *Ger. em.* 523, 4.
Vermicularis fruticosa altera, *Park.* 731.
Salsola fruticosa, *Lin. S. P.* 324.
Chenopodium fruticosum, *Lin. Hort. Clif.*
Shrubby glasswort.

Sea-shore; shrubby; August.

Shrub upright, branches many; *leaves* erect, perennial, rather glaucous; *flowers* greenish; *bracteæ* 3, scariose.

VI. 45. SALICORNIA. Dodonæus. *Glasswort.*

Perigonium turbinate, not cut, ventricose, succulent; *stamen* 1 or 2, inserted at the base of the perigonium; *style* 2-cut; *utriculus* membranaceous, enclosed in the enlarged fleshy perigonium; *seeds* vertically compressed; spermodermis double, the outer coriaceous; corculum annular, cylindrical; perisperm farinaceous, radicle below.—*Stem* shrubby or herbaceous, leafless, round, jointed; branches opposite; joints 2-toothed at the tip, the terminal flower-bearing; *flowrets* small, sessile, three on each side of the joint.

1. *Salicornia herbacea.* *Herb glasswort.*

Stem herbaceous, upright; internodes reverse-conical; joints compressed, nicked; *spikes* attenuated towards the tip; *stamen* 1.

Salicornia, *Raii Syn.* 136, 1.
Salicornia, seu Kali geniculatum, *Ger. em.* 535; *Park.* 280.
Salicornia herbacea, *Lin. S. P.* 5.
Salicornia europæa α, *Huds. Fl. Angl.* 1.
Salicornia annua, *Afzel. MS.* 1; *Engl. Bot.* 415.
Salt-wort. Sea-grass. Crab-grass. Frog-grass.

Sea-shores; annual; August and September.

Branches many, jointed, succulent, fleshy.—Ashes alkaline.

2. *Salicornia procumbens.* *Procumbent glasswort.*

Stem herbaceous, lying down; internodes reverse-conical; branches simple; *spikes* attenuated towards the tip; *stamens* 2.

Salicornia myosuroides procumbens, surculis longissimis, *Dillen in Raii Syn.* 137, 2.
Salicornia europæa δ, *Huds. Fl. Angl.* 1.
Salicornia herbacea γ, *Smith Fl. Brit.* 2.
Salicornia procumbens, *Engl. Bot.* 2475.

Sea-side; annual or biennial; August and September.

Much subdivided at bottom; *style* nearly simple; *spikes* very long.

β. *purpurea.* *Spike* small, purplish; *stem* very much spread.

Salicornia ramosior procumbens, foliis brevibus purpurascentibus, *Dillen in Raii Syn.* 137, 4.
Salicornia europæa η, *Huds. Fl. Angl.* 1.
Salicornia herbacea δ, *Smith Fl. Brit.* 2.

3. *Salicornia radicans.* *Rooting glasswort.*

Stem woody, rooting at bottom; joints compressed, nicked; internodes subcylindrical; *spikes* oblong; *stamens* 2.

Salicornia erecta, foliis brevibus, cupressiforme, *Dillen in Raii Syn.* 137, 5.
Salicornia europæa β, *Huds. Fl. Angl.* 1.
Salicornia biennis, *Afzel. MS.* 2.
Salicornia prostrata, *Engl. Bot.* 1691.

Muddy sea-shores; biennial or perennial; August.

Root creeping; *spikes* swelled.

3. *Salicornia fruticosa.* *Shrubby glasswort.*

Stem woody, ascending; joints and internodes cylindrical; *spikes* nearly subsessile, cylindrical, obtuse.

Salicornia, q. Kali geniculatum perenne fructicosus procumbens, *Raii Syn.* 136, 2.
Salicornia europæa γ, *Huds. Fl. Angl.* 1.
Salicornia fruticosa, *Lin. S. P.* 5.
Jointed glass-wort.

Sea bogs; perennial; August.

Stem rather shrubby, very much branched; *spikes* many-flowered; *flowers* rather distant.

VII. 46. SALSOLA. Cæsalpinus. *Saltwort.*

Perigonium 5-parted, persistent; lobes furnished after flowering with a membranaceous keel, or periphyllum; *stamens* 5; *styles* 2, 3-cut; *stigmata* 2 or 3; *utriculus* membranaceous, enclosed in the connivent perigonium; *seed* rather gibbose; spermodermis simple, membranaceous; perisperm 0; corculum spiral, horizontal; cotyledons very long, linear; radicle above.—*Stem* herbaceous or shrubby; *flowers* axillary, solitary, sessile; *bracteæ* 3.

Salsola decumbens. *Trailing saltwort.*

Stem herbaceous, decumbent; *leaves* subulate, spinous, rough; *bracteæ* 3, leaflike, spinous.

Kali spinosum cochleatum, *Raii Syn.* 159.
Tragus Matthioli, *Ger. em.* 1117, 2; *Park.* 1034.
Salsola Kali, *Lin. S. P.* 322.
Prickly glasswort. Bastard sea-grape.

Sandy sea-shores; annual; July.

Stem stiff, very much branched, pubescent; *leaves* spreading; *periphylla* reddish.

Fam. XVII. 17. AMARANTHIDEÆ. *Amaranthi*, Jussieu. *Amaranthaceæ*, De Candolle.

Perigonium free, often coloured; æstivation imbricate; *stamens* 3 to 5, hypogynous, free or monadelphious; *ovary* 1, free; *styles* many; *stigmata* simple; *capsules* 1 or many-seeded; *seeds* upright; perisperm farinaceous, central; corculum annular, peripherical; cotyledons incumbent; radicle below; plumule inconspicuous.—*Herbaceous; leaves* alternate or opposite, not cut; *stipules* 0; *flowers* small, often unisexual, capitate or spiked, often girt with coloured scales.

I. 47. AMARANTHUS. Dioscorides. *Strawberry-blite.*

Monoicous; *perigonium* 3-sepaled.—Male. *Stamens* 3, distinct.—Fem. *Styles* 3; *pyxidium* 1-seeded, 3-beaked; *seeds* erect; umbilicus naked; spermodermis double, the outer crustaceous. — *Stem* streaked; *flowers* glomerate, axillary or panicled, terminal.

Amaranthus minor. *Small strawberry-blite.*

Stem spread; *leaves* ovate, retuse or nicked; *flowers* glomerate, lateral.

Blitum rubrum minus, *Dillen in Raii Syn.* 157; *Ger. em.* 321, 4.
Amaranthus Blitum, *Lin. S. P.* 1405.
Small garden-blite. Small red blite.

Fields and dunghills; annual; August.

Stem much branched; *leaves* alternate; *petioles* long; *flowers* green; *seed* compressed.

Subseries III. B. PLANTÆ EXOGENÆ COROLLIFLORÆ.
Dicotyledones monopetalæ hypogynæ, Jussieu Gen. Plant.

Perigonium double; *petals* soldered into a single one; inserted on the thalamus, and bearing the stamens.

FAMILIES.

A. *Pericarp a cariopsis.*

Cariopsides 4 or 2, naked;
corolla irregular; *stamens* 2 or 4 ..... LABIATÆ. 32.
Cariopsides 4 or 2, naked;
corolla irregular; *stamens* 5 ..... BORAGINEÆ. 31.
Cariopsides 4, in an utriculus,
bearing the style; *stamens* 4 ..... PYRENACEÆ. 33.

B. *Pericarp* 1, *capsular or drupaceous;*

a. *Seeds on a central spermophore.*

Fruit 1-celled; *corolla* regular.. PRIMULACEÆ. 21.
Fruit 1-celled; *corolla* irregular
LENTIBULARES. 24.
Fruit 2 or 4-celled, becoming 1-celled;
corolla regular; *stamens* 4..... PLANTAGINEÆ. 18.
Fruit 2-celled, septifidal;
corolla not lipped, plaited; *stam.* 5.... SOLANEÆ. 26.
Fruit 2-celled, septifidal;
corolla lipped; *stamens* 2 or 4.. SCROPHULARIÆ. 25.
Fruit 2-celled, loculicidal;
retinacle 0; *stamens* 2 or 4, *filaments*
separate ..... RHINANTHACEÆ. 22.
Fruit 3-celled, loculicidal;
corolla regular; *stamens* 5.... POLEMONIACEÆ. 28.

b. *Seeds affixed at the base.*

Capsule 2 or 4-celled .... CONVOLVULACEÆ. 30.
Berry 1-celled ..... JASMINEÆ. 32.
Capsule 1-celled, 1-seeded;
stamens 4 ..... LITTORELLIDEÆ. 19.

c. *Seeds affixed at the tip.*

Utriculus 1-seeded, seed erect .... STATICINÆ. 20.
Samara 2-seeded; seed reversed .. FRAXINEÆ. 35.

d. *Seeds parietal.*

Corolla not lipped ..... GENTIANÆ. 27.
Corolla lipped ..... OROBANCHIDEÆ. 23.

C. *Pericarps many, capsular.*

Follicles 2 ..... VINCÆ. 29.

Fam. I. 18. PLANTAGINEÆ. Jussieu.

Calyx 4-sepaled, persisting; *corolla* 1-petaled, tubular, scariose, persisting; limb 4-parted; *stamens* 4; *filaments* inserted in the tube, alternate with the cuts, exserted, flaccid; induplicate at the æstivation; *anthers* 2-celled; cells opposite, contiguous, opening longitudinally; *ovary* sessile, without any girding disk, 2 or 4-celled; *ovules* peltate, solitary or indefinite; *style* 1, capillary; *stigma* hispid, undivided; *pericarpium* a pyxidium; dissepiment longitudinal, becoming free, seedbearing; *seeds* sessile, peltate, single or in pairs, or many; *shell* mucilaginous; *perisperm* fleshy, same shape as the seed; *corculum* straight, central, nearly as long as the perisperm; *radicle* below; *plumula* inconspicuous.—*Stem* herbaceous, short or scarcely any; *hairs* simple, jointed; *leaves* mostly radical, crowded, stellate, not cut, or toothed, often flat, and ribbed, sometimes semicylindrical; *scapes* axillary; *flowers* spiked, sessile; bractea 1 to each flower.

Ovary 2-celled; *dissepiments* flat;
cells many-seeded ..... PLANTAGO. 48.
Ovary 2-celled; *dissepiments* flat;
cells one-seeded ..... ARNOGLOSSUM. 49.
Ovary 3 or 4-celled; *dissepiments* 4-sided;
cells one-seeded ..... ASTEROGEUM. 50.

Gen. I. 48. PLANTAGO. Pliny. *Plaintain.*

Corolla 4-cut; *anthers* oblong; *ovary* 2-celled; dissepiments flat; cells many-seeded.—*Stem* scarcely any; *leaves* crowded, radical, flat, ribbed; *scape* radical.

1. *Plantago major.* *Great plantain.*

Spike 30 or 40-flowered; *bracteæ* membranaceous; *leaves* ovate, 7 or 9-ribbed, toothed, or not cut.

Plantago latifolia vulgaris, *Raii Syn.* 314, 1; *Park.* 493.
Plantago latifolium, *Ger. em.* 419, 1.
Plantago major, *Lin. S. P.* 163.
Broad-leaved plantain. Waybrede.

Pastures and waysides; perennial; all the year.

Stem 7 to 18 in. high, rather rough, approaching to 2-edged; *leaves* with long petioles.—Leaves applied as a dressing to fresh wounds.

β. *paniculata.* *Spike* abortive, panicled; *bractea* leaflike.

γ. *dentata.* *Leaves* with large teeth at the base.

2. *Plantago bracteata.* *Bracteated plantain.*

Bractea spreading, very long, leaflike; *leaves* ovate, bald, ending in a long petiole.

Plantago rosea spicata, *Ger. em.* 419, 4.
Plantago bracteata, *Mœnch. Meth.* 439.
Plantago major, var. *Lin. S. P.* 163.
Spiked rose-plantain.

Waysides; perennial; June.

Leaves 7 or 9-ribbed; *spike* flat or pyramidical, and remains the same when cultivated.

3. *Plantago minima.* *Small plantain.*

Spike 3 to 6-flowered; *bracteæ* membranaceous; *leaves* ovate, 3-ribbed, toothed or not cut.

Plantago latifolia glabra minor, *Raii Syn.* 314, 3.
Plantago major β, *Lin. S. P.* 163.
Plantago minima, *De Cand. Fl. Gall.* 22, 97.

Dry barren pastures; perennial; June to August.

Stem 18 in. high; *leaves* rough.

II. 49. ARNOGLOSSUM. Dioscorides. *Lambs-tongue.*

Corolla 4-cut; *anthers* oblong; *ovary* 2-celled; *dissepiments* flat; *seeds* 1 in each cell.—*Stem* scarcely any; *leaves* and *scapes* radical.

1. *Arnoglossum incanum.* *Hoary lambs-tongue.*

Leaves ovate, lanceolate, pubescent; *spike* cylindrical; *scape* round.

Plantago major incana, *Raii Syn.* 314, 3; *Park.* 493.
Plantago incana, *Ger. em.* 419, 2.
Plantago media, *Lin. S. P.* 163.
Hoary plantain.

Chalky soils; perennial; June to August.

Stem 10 in. high; *spikes* shorter than the scape; *leaves* 5-ribbed, often toothed and ovate.

β. *ramosum.* *Spike* branched.

γ. *variegatum.* *Leaves* variegated with yellow.

2. *Arnoglossum lanceolatum.* *Spearshape lambs-tongue.*

Leaves lanceolate; *spikes* ovate, bald; *scape* angular, downy.

Plantago quinquenervia, *Raii Syn.* 314, 5; *Ger. em.* 422, 1.
Plantago angustifolia, sive quinquenervia major, *Park.* 496.
Plantago lanceolata, *Lin. S. P.* 164.
Ribwort plantain. *Rib-grass.*

Pastures; perennial; June.

Leaves mostly 5-ribbed, dark green; *spike* variegated; *scape* 2 feet high.

β. *trinervium.* *Leaves* narrow, 3-ribbed.

Plantago angustifolia minor, *Dillen in Raii Syn.* 315, 6.

γ. *roseum.* *Lower bracteæ* leaflike, longer than the spike.

Plantago quinquenervia rosea, *Ger. em.* 422, 2.

δ. *ramosum.* *Spike* with 2 or 3 heads.

3. *Arnoglossum maritimum.* *Sea lambs-tongue.*

Leaves half-round, not in the least cut, fleshy, woolly, at bottom; *spike* cylindrical, dense; *scape* round, downy, upright or ascending, longer than the leaves.

Plantago marina, *Raii Syn.* 315, 7.
Plantago marina vulgaris, *Park.* 498.
Plantago maritima, *Lin. S. P.* 165.
Plantago montana, *Huds. Fl. Angl. ed.* 1, 53.
Coronopus, *Ger. em.* 425, 1.
Sea buckshorn. *Sea plantaine.*

Sea-coasts; perennial; June and July.

Root woody, truncated; *scape* 6 in. high; *spikes* an inch long; *leaves* grooved above; *bracteæ* keeled; *tubes* of the corolla woolly.

4. *Arnoglossum gramineum.* *Grasslike lambstongue.*

Leaves rather linear, flat, sparingly toothed, bald at bottom; *spike* cylindrical; *scape* round, scarcely as long as the leaves.

Plantago graminea, *Lamarck Illustr.* 343.
Plantago maritima 3, *With. Bot. Arr.* 256.

Sea-coasts; perennial; July.

Leaves 5 inches long, 3-ribbed; *spike* 2 in. long; *bracteæ* ribbed, not keeled.

5. *Arnoglossum Alpinum.* *Alpine lambstongue.*

Leaves linear, lanceolate, flat, bald, not cut, soft; *spike* cylindrical; *bracteæ* shorter than the flower; *scape* round, double the length of the leaves.

Plantago, an Alpina angustifolia J. Bauhini, *Raii Syn.* 315, 9.
Plantago Alpina, *Lin. S. P.* 165.
Plantago maritima γ, *Huds. Fl. Angl.* 64.

Alpine pastures; perennial; June.

Leaves 2 inches high; *spike* an inch long; *flowers* loose.

6. *Arnoglossum subulatum.* *Awlshape lambstongue.*

Leaves linear, awlshape, hard; *spike* cylindrical; *bracteæ* shorter than the flower; *scape* round, pubescent, rather flexuose.

Plantago subulata, *Lin. S. P.* 166.
Plantago Coronopus 3, *With.* 257.

Meadows on the sea-coast; perennial; June to August.

Leaves hard, pointed, dark green, hairy; *spike* cylindrical; *flowers* slightly distant.

III. 50. ASTEROGEUM. *Star-of-the-earth.*

Perigonium 4-lobed; *anthers* ending in a small lanceolate membrane; *ovary* 3 or 4-celled; *dissepiments* 3 or 4-seeded; *cells* 1-seeded.—*Stem* scarcely any; *spike* and *leaves* radical.

Asterogeum laciniatum. *Jagged star-of-the-earth.*

Leaves rather hairy, pinnatifid; *scape* round, downy; *bracteæ* hairy.

Plantago foliis laciniatis, Coronopus dicta, *Raii Syn.* 315, 8.
Cornu cervinum, *Ger. em.* 427.
Plantago Coronopus, *Lin. S. P.* 166.
Harts-horn. Herb-ivy.

Sandy places; annual; May to August.

Leaves hairy, pinnatifid or bipinnatifid; *scape* an inch long.

β. *capitatum.* *Spike* very short, few-flowered, almost capitate; *leaves* nearly entire.

Plantago gramineo folio hirsuto, minor, capitulo rotundo brevi, *Dillen in Raii Syn.* 316, 10.

Fam. II. 19. LITTORELLIDEÆ. *Plantaginum genus.* Jussieu.

Flowers unisexual.—MALE. *Calyx* 4-parted, persisting; *corolla* 1-petaled, tubular, scariose, persisting; *limb* 4-parted; *stamens* 4, inserted on the receptacle; *filaments* exserted,

flaccid; before æstivation induplicate; *anthers* 2-celled, opening longitudinally; *rudiment* of the pistill minute.—Fem. *Calyx* none; *bracteæ* 3; *corolla* urceolate, undivided, contracted at the mouth, slightly toothed; *stamens* 0; *ovary* 1-celled, 1-seeded; *ovule* upright; *style* 1, capillary, very long; *stigma* hispid, not cut; *pyxidium* 1-seeded.—*Herb* stemless; *leaves* linear, rushlike, dilated at bottom, rather sheathing; *male flower* peduncled, solitary; *peduncle* with a pellucid, reticulated, membranaceous bractea about the middle; *female flowers* 2 or 3, radical, sessile.

51. LITTORELLA. Linnæus. *Shore-weed.*

No other genus in this family.

Littorella lacustris. *Lake shore-weed.*

Plantago palustris gramineo folio monanthos, Parisiensis, *Raii Syn.* 11.

Plantago uniflora, *Lin. S. P.* 167.

Littorella lacustris, *Lin. Mant.* 295.

Inundated sandy places; perennial; June.

Root fusiform; *leaves* bald, convex beneath; *flowers* upright, white; *style* nearly as long as the scape.

β. *hirsuta.* *Leaves* hairy.

Fam. III. 20. STATICINÆ. Hoffmansegg and Link.
Plumbaginum pars. Jussieu.

Perigonium double, persisting; *calyx* 1-leafed, tubular, not cut, plaited, persisting; *corolla* 5-petaled, equal; *stamens* 5, adnate to the claw of the petals; *ovary* 1, free, 1-seeded; ovule upright; placentarium apicular; placenta threadlike, bent; *styles* 5; *stigmata* 5; *utriculus* membranaceous; *spermodermis* single, coriaceous; perisperm farinaceous; corculum central, compressed, erect, nearly as long as the seed; plumula inconspicuous; radicle below.—*Herbaceous* or under-shrubby; *leaves* simple, not cut, alternate or crowded, radical; rather sheathing at bottom; *flowers* hermaphrodite, capitate or spiked.

Flowers capitate, involucrated;
leaves radical ..... Statice. 52.

Flowers sessile, spread;
leaves spread ..... Limonium. 53.

I. 52. STATICE. Dalechamp. *Thrift.*

Involucrum many-flowered, scariose, many-leaved, reflexed at bottom, sheathing the scape; *calyx* scariose, plaited; *stamens* 5.—*Leaves* small, radical; *scapes* many, naked; *flowers* capitate, terminal.

Statice pulchellum. *Handsome thrift.*

Leaves linear, flat, obtuse, flaccid.

Statice montana minor, *Raii Syn.* 203.
Caryophyllus marinus minimus Lobelii, *Ger. em.* 602, 1.
Gramen marinum minus, *Park.* 1279.
Statice Armeria, *Lin. S. P.* 394.
Sea gilliflower. Thrift. Sea-grass. Our ladies cushion.

Sea-shores and alpine places; peren.; July and August.

Root woody; *leaves* in tufts, linear, bald; *scape* downy; *flowers* rose-coloured.

II. 53. LIMONIUM. Dioscorides. *Sea-lavender.*

Involucrum scariose, 3 or 4-leaved, 1-flowered.—*Leaves* cauline, spread; *flowers* sessile, distant, in a longitudinal series.

Limonium commune. *Common sea-lavender.*

Stem panicled, round; *leaves* oblong, bald, obtuse, beneath mucronate, edge undulated.

Limonium, *Raii Syn.* 201, 1; *Ger. em.* 411, 1.
Limonium majus vulgatius, *Park.* 1234.

Sea-shores; perennial; July and August.

Root woody; *leaves* not in the least cut; *scape* alternately branched; *twigs* corymbose; *flowers* sky-blue.

β. *minus.* *Plant* much smaller; *leaves* pointed, tapering to the bottom.

Limonium minus, *Raii Syn.* 202, 2.
Limonium parvum, *Ger. em.* 411, 2.

γ. *obtusum.* *Plant* smaller; *leaves* short, blunt, tapering at bottom.

δ. *serotinum.* *Leaves* long, taper, pointed; *flowers* late.

Limonium Anglicum minus, caulibus ramosioribus, floribus in spicis rarius sitis, *Dillen in Raii Syn.* 202, 3.

2. *Limonium reticulatum.* *Network sea-lavender.*

Stem diffused, prostrate, panicled; *barren branches* naked, bent back; *leaves* wedgeshape, unarmed; *scales* of the involucrum smooth.

Statice reticulatum, *Lin. S. P.* 394.

Sea-shore; perennial; July and August.

Leaves oblong wedgeshape, petioled, acute; *scape* prostrate; *twigs* divaricating, lower ones barren; *flowers* terminal, blue.

Fam. IV. 21. PRIMULACEÆ. Ventenat, *Lysimachiæ*, Jussieu. *Anagallidæ*, Adanson. *Rotacearum et Preciarum pars*, Linnæus.

Calyx 1-leaf, persisting, 5 or rarely 4-cut, regular; *corolla* 1-sepaled, regular; limb 4 or 5-cut; *stamens* as many as the lobes opposite to them; *ovary* free, 1-celled; *style* 1; *stigma* capitate; *capsule* valvate; spermophore central, free; *seeds* many, peltate; perisperm fleshy; corculum straight, enclosed, parallel to the umbilicus; radicle below (De Candolle) or vague.—*Stem* herbaceous; *leaves* simple, often not cut, opposite, whirled, or spreading.

Calyx 4-sepaled; *corolla* rather pitcher-shape; *stamens* 4, distinct, bald; *pyxidium*... CENTUNCULUS. 54.

Calyx 5-sepaled; *corolla* rotate; *stamens* 5, bearded; *pyxidium*..... ANAGALLIS. 55.

Calyx 5-sepaled; *corolla* nearly bellshape; *stamens* 5, connate; *pyxidium* ..... IRASEKIA. 56.

Calyx 5-sepaled; *cor.* rotate; lobes distant; *stam.* 5, distinct, smooth; *capsule* 10-valved NAUMBURGIA. 58.

Calyx 5-sepaled; *corolla* rotate, 5-toothed; *stamens* 5, distinct, smooth; *capsule* 10-valved NUMULARIA. 59.

Calyx 5-sepaled; *corolla* salvershape; *stamens* 5, nearly sessile; *capsule* 5-valved HOTTONIA. 60.

Calyx 5-sepaled; *cor.* rotate, limb reflexed; *stam.* 5, short; *capsule* fleshy, 5-valved.... CYCLAMEN. 63.

Calyx 5-sepaled; *corolla* rotate; *stam.* 5, connate, glandular; *caps.* 5 to 10-valved..... LYSIMACHIA. 57.

Calyx 7-sepaled; *corolla* rotate; *stamens* 7; *capsule* ..... TRIENTALIS. 61.

Calyx 5-toothed; *corolla* salvershape; lobes 2-cut; *stam.* 5, enclosed; *capsule* .... PRIMULA. 62.

I. 54. CENTUNCULUS. Pliny. *Chaff-weed.*

Calyx 4-lobed; *corolla* rather pitchershape, 4-cut; *stamens* 4; *filaments* short, bald, distinct; *pyxidium* globose. —*Leaves* alternate; *flowers* axillary; *bracteæ* 0.

Centunculus minimus. *Small chaff-weed.*

Leaves ovate; *flowers* sessile.

Centunculus, *Dillen in Raii Syn.* sheet A. 16.
Centunculus minimus, *Lin. S. P.* 169.
Bastard pimpernel.

Bogs and inundations; annual; June and July.

Stem rather branchy; *leaves* sessile, spreading; *flowers* white or pink, shortlived, only open in the hottest part of the day.

II. 55. ANAGALLIS. Dioscorides. *Pimpernel.*

Calyx 5-lobed; *corolla* rotate, 5-lobed, spreading; *stamens* 5; *filaments* bearded, distinct; *stigmata* obtuse, crenate; *pyxidium* globose.—*Stem* 4-angled; *leaves* opposite, dotted underneath; *flowers* solitary, axillary.

1. *Anagallis cærulea.* *Blue pimpernel.*

Stem rather erect; *leaves* opposite or ternate, ovate, rather pointed; *lobes* of the corolla becoming reflex, edge toothed.

Anagallis fœmina, *Raii Syn.* 382, 3; *Ger. em.* 617, 2.
Anagallis cœruleo flore, *Park.* 558.
Anagallis cœrulea, *Schreb.*

Fields and gardens; annual; June and July.

Stem slightly branched, rather winged; *flowers* blue.

β. *alba.* *Flowers* white.

Anagallis terrestris flore albo, *Raii Syn.* 282, 4.

2. *Anagallis phœnicea.* *Scarlet pimpernel.*

Stem diffused, slightly procumbent; *leaves* opposite and ternate, ovate, obtuse; *peduncles* longer than the leaves; *lobes* of the corolla not cut, dilated; margin glandular, hairy.

Anagallis flore phœniceo, *Raii Syn.* 282, 1; *Park.* 558.
Anagallis mas, *Ger. em.* 617, 1.
Anagallis arvensis, *Lin. S. P.* 211.

Fields and gardens; annual; June and July.

Stem much branched, not winged; *flowers* scarlet.—Collected before the flowers expand, and given in powder 1 scr. 4 times a day, useful in epilepsy and madness; *flower* opens only when fine weather is coming on.

β. *verticillata.* *Leaves* in threes or fours.

Anagallis phœnicia foliis amplioribus ex adverso quaternis, *Raii Syn.* 282, 2.

III. 56. IRASEKIA. Schmidt. *Twopenny-grass.*

Calyx 5-lobed; *corolla* nearly bellshape, veined; limb 5-lobed, upright, spreading; *stamens* 5; filaments connate at the base, bearded; *stigma* acute; *pyxidium* globose.—*Stem* angular; *leaves* opposite, petiolated; *flowers* solitary.

Irasekia alpina. *Alpine twopenny-grass.*

Leaves opposite, ovate, pointed, petiolate; *stem* prostrate, filiform.

Nummularia minor, flore purpurascente, *Raii Syn.* 283, 2; *Ger. em.* 632, 2; *Park.* 555.
Lysimachia tenella, *Lin. S. P.* 211.
Anagallis tenella, *Lin. Syst. Veg. ed.* 14, 196.
Irasekia alpina, *Hoffm. Germ.* 2.
Purpleflowered moneywort.

Inundated heaths and bogs; perennial; July and August.

Stem creeping, thin; *leaves* spreading, light green; *peduncles* 2 or 3 times as long as the leaves.

IV. 57. LYSIMACHIA. Dioscorides. *Loosestrife.*

Calyx 5-sepaled; *corolla* rotate, 5-lobed; *stamens* 5; *filaments* covered with capitate glandular hairs, connate at the base; *capsule* globose, opening at the tip by many valves.—*Stem* 4-angular; *flowers* axillary, solitary, or racemose.

Flowers solitary, axillary.

1. *Lysimachia repens.* *Creeping loosestrife.*

Stem creeping; *leaves* roundish, rather heartshape; *peduncles* solitary; *sepales* ovate, pointed.

Nummularia, *Raii Syn.* 283, 1; *Ger. em.* 630, 1.
Nummularia vulgaris, *Park.* 555.
Lysimachia Nummularia, *Lin. S. P.* 211.
Moneywort. Herb twopence. Twopenny-grass.

Fields and damp pastures; perennial; June, July.

Stem compressed, mostly simple; *leaves* pale green, often perennial; *peduncles* shorter than the leaves; *corolla* glandular.

Flowers terminal, racemose, bracteated.

2. *Lysimachia vulgaris.* *Common loosestrife.*

Leaves opposite, attenuated, ovate, lanceolate; *sepales* lanceolate.

Lysimachia lutea, *Raii Syn.* 282, 1; *Ger. em.* 474, 1.
Lysimachia lutea major vulgaris, *Park.* 544.
Yellow willow-herb.

Watery places and rivers; perennial; July.

Root creeping; *stem* upright; *leaves* pointed, veined, bald.

β. tomentosa. *Leaves* tomentose underneath.

V. 58. NAUMBURGIA. Moench. *Yellowherb.*

Calyx 5-sepaled; *corolla* rotate, 5-lobed; lobes distant with a tooth between each; *stamens* 5, longer than the corolla; *filaments* filiform, smooth, distinct; *style* long, filiform; *pyxidium* globose, many-valved.—*Herb* entirely covered with red glands; *stem* simple, round; *leaves* opposite, sessile, entire; *racemes* axillary, opposite, solitary; *flowers* peduncled, bracteated.

Naumburgia guttata. *Spotted Yellowherb.*

Leaves linear, lanceolate; *racemes* peduncled.

Lysimachia lutea, flore globoso, *Raii Syn.* 282, 3; *Ger. em.* 475, 3; *Park.* 544.
Lysimachia thyrsiflora, *Lin. S. P.* 209.
Naumburgia guttata, *Moench. Meth. Sup.* 23.
Tufted loose-strife.

Watering places; perennial; July.

Root creeping; *stem* upright, 18 in. high; *leaves* bald; *racemes* erect, close; *flowers* yellow, spotted.

VI. 59. NUMULARIA. Tragus. *Moneywort.*

Calyx 5-sepaled; *corolla* rotate, 5-lobed; *stamens* 5, shorter than the corolla; *filaments* distinct, smooth, bald; *capsule* globose, many-valved.—*Stem* recumbent, 4-sided; *leaves* opposite, petiolated, bald, entire; *peduncles* axillary, solitary, 1-flowered; *bractea* 0.

Numularia sylvatica. *Wood moneywort.*

Leaves ovate, pointed; *peduncles* longer than the leaves; *sepales* subulate.

Numularia sylvatica, *Gesner Hort. Germ.*
Anagallis lutea, *Raii Syn.* 282, 5; *Ger. em.* 618, 4.
Anagallis flore luteo, *Park.* 558.
Lysimachia nemorum, *Lin. S. P.* 211.
Yellow pimpernel.

Woods and damp hedges; perennial; May to September.

Stem rooting, shining; *peduncle* slender; *flowers* yellow.

VII. 60. HOTTONIA. Boerhaave. *Water-violet.*

Calyx 5-sepaled; *corolla* salvershaped; tube short; limb flat, 5 to 8-lobed; *stamens* 5 to 8, nearly sessile; *stigma* globose; *capsule* globose, pointed, 1-celled.—*Herb* aquatic; *leaves* whirled, pinnate or toothed, immersed; *flowers* verticillately spiked; *spikes* terminal; *bractea* 1 to each flower.

Hottonia palustris. *Marsh water-violet.*

Leaves pinnately pinnatifid, not cut; *flowers* peduncled, whorled.

Hottonia, *Raii Syn.* 285.
Viola palustris, *Ger. em.* 826, 1.
Hottonia palustris, *Lin. S. P.* 208.
Bog featherfoil.

Watery places; perennial; June and July.

Root sarmentose; *stem* naked; *leaves* bald, not in the least cut; *flowers* flesh-coloured.

β. *rosea.* *Flowers* deep rose-colour.

VIII. 61. TRIENTALIS. Cordus. *Wintergreen.*

Calyx 7-sepaled; sepales subulate; *corolla* 5 to 7-parted, equal, persistent; *stamens* 5 to 7; *stigma* nicked; pericarp membranaceous.—*Rhizoma* creeping; *stem* simple, naked at bottom; *leaves* verticillate, veined; *peduncles* terminal, aggregate, 1-flowered.

Trientalis europea. *European wintergreen.*

Alsinanthemos, *Raii Syn.* 286.
Trientalis europea, *Lin. S. P.* 488.
Chickweed winter-green.

Turfy mountains; perennial; May and June.

Rhizoma rather tuberous; *stem* 12 in. high; *leaves* lanceolate, not cut, bald; *flowers* spreading, snow-white, elegant; *anthers* subulate.

IX. 62. PRIMULA. Matthiolus. *Primrose.*

Calyx tubular, 5-toothed, persistent; *corolla* salvershape; tube cylindrical, longer than the calyx; limb 5-cut; lobes nicked; *stamens* 5, enclosed; *capsule* ovate, opening at the top in 10 valves.—*Leaves* radical, mostly wrinkly; *flowers* fascicled; *bractea* 1 at the bottom of each peduncle.

1. *Primula grandiflora.* *Large-flowered primrose.*

Leaves ovate, oblong, wrinkled, toothed; *fascicles* radical, few-flowered; *lobes* of the calyx lanceolate, pointed, as long as the tube; limb of the corolla flat.

Primula veris vulgaris, *Raii Syn.* 284, 1; *Park.* 535.
Primula veris minor, *Ger. em.* 781, 5.
Primula veris, *Lin. S. P.* 205.
Primula acaulis, *Curt. Fl. Lond.*
Primula sylvestris, *Scopoli Carn.*
Primula vulgaris, *Huds. Fl. Angl.* 83.
Primula grandiflora, *Lamarck. Fl. Fr.*
Field primrose.

Woods and hedges; perennial; April.

Leaves hirsute underneath; *peduncle* as long as the leaves; *bracteæ* awlshape; *flowers* upright.—Leaves in doses of a drachm and a half, a strong but safe emetic.

β. *rufa.* *Flowers* reddish, liver-colour.

2. *Primula elatior.* *Tall primrose.*

Leaves ovate, wrinkled, rather toothed; *fascicles* many-flowered; *teeth* of the calyx chaff-like, pointed, scarcely half as long as the tube; *limb* of the corolla flat.

Primula pratensis inodorata lutea, *Raii Syn.* 284, 2; *Ger. em.* 780, 2.
Primula veris β, *Lin. S. P.* 204.
Paralysis altera odorata, flore pallido, polyanthos, *Park. Par.* 244.
Primula vulgaris, *Huds. Fl. Angl.* 84.
Primula inodora, *Relh. Cant.* 81.
Primula elatior, *With. Bot. Arr.* 234.
Great cows-lips. Ox-lips.

Fields and pastures; perennial; April.

Scape longer than the leaves; *outer flowers* often drooping; *neck* of the tube of the corolla hemispherical.

3. *Primula veris.* *Spring primrose.*

Leaves ovate, oblong, wrinkled, rather toothed; *fascicles* many-flowered; *flowers* drooping; *teeth* of the calyx very blunt; *limb* of the corolla concave, very small.

Primula veris major, *Raii Syn.* 284, 3; *Ger. em.* 780, 1.
Paralysis vulgaris pratensis, flore simplici odorato, *Park. Par.* 244.
Primula veris α, *Lin. S. P.* 204.
Primula veris, *Huds. Fl. Angl.*
Primula officinalis, *With. Bot. Arr.*
Common cows-lips. Paigles.

Fields and pastures; perennial; April to June.

Leaves contracted in the middle; *scapes* few, longer than the leaves; *flowers* scented; *limb* small; *tube* oblong.—Root scented like anise; leaves sometimes used as a pot-herb or as salad; flowers used to make a fine slightly narcotic wine.

4. *Primula? farinosa.* *Mealy primrose.*

Leaves ovate oblong, rather crenate, bald, beneath powdery; *fascicles* many-flowered; *flowers* spreading; *limb* of the corolla flat.

Auricula ursi, q. Verbasculum umbellatum Alpinum minus C. Bauhini, *Raii Syn.* 285, 1.
Primula veris flore rubro, *Ger. em.* 783, 1.
Paralysis minor flore rubro, *Park. Par.* 246.
Primula farinosa, *Lin. S. P.* 205.
Bird's eye.

Mountain bogs; perennial; June and July.

Leaves light green, smooth, veined beneath; *scape* upright; *limb* of the corolla small, red, paler beneath; lobes linear, nicked; *mouth* of the tube glandular.

X. 62. CYCLAMEN. Theophrastus. *Sow-bread.*

Calyx 5-cut; *corolla* rather rotate; tube short; mouth prominent; limb 5-parted, reflex; *stamens* 5; filaments very short; anthers approximating; *stigma* pointed; *capsule* fleshy, globose, 5-valved. — *Root* fibrous; *combus* roundish; *leaves* radical, veiny, often spotted; *petioles* long, flexuous; *scape* 1-flowered; *flowers* drooping, white or purplish; *fruit* twists up spirally, and buries itself in the ground.

Cyclamen vernum. *Spring sow-bread.*

Leaves heartshape, angular, edge toothed.

Cyclamen vernum, *Ger. em.* 843, 3.
Cyclamen europæum, *Smith Fl. Brit.* 224.
Cyclamen hederæfolium, *Ait. Hort. Kew.* 196.

Woods and hedges; perennial; April.

Combus large; *leaves* bald, spotted and waved with white, beneath purplish; *lobes* of the corolla twisted.

Fam. V. 22. RHINANTHACEÆ. De Candolle. *Pedicularæ.* Jussieu.

Calyx divided, often tubular, persisting; *corolla* hypogynous, irregular, often lipped; *stamens* 2 or 4, inserted on the corolla, 2 often shorter than the others; *anthers* often 2-bristled at the base; *ovary* free, 2-celled; *style* simple; *capsule* 2-valved, valves joined together by the central placentarium; *perisperm* fleshy; corculum straight; cotyledons half round; plumula inconspicuous.—*Herb* often becomes black by drying; *leaves* opposite or alternate; *flowers* often spiked; *bractea* 1 to each flower.

A. *Corolla rotate, irregular; calyx* 4 *or* 5*-parted.*

Stamens 2; *corolla* 4-lobed ..... VERONICA. 64.
Stamens 4, didynamous; *cor.* 5-lobed .. SIBTHORPIA. 65.

B. *Corolla ringent,* 2*-lipped; calyx* 1*-leafed,* 4*-cut; stamens* 4*, didynamous.*

Seeds striated; *lower anthers* spinose .. EUPHRASIA. 66.
Seeds striated; *anthers* spinose ..... ODONTITES. 67.
Seeds angular; *anthers* tomentose ..... BARTSIA. 68.
Seeds flat, imbricate; *galea* compressed RHINANTHUS. 69.
Seeds 2, smooth; *galea* compressed MELAMPYRUM. 71.

C. *Corolla ringent,* 2*-lipped; calyx* 1*-leafed,* 5*-cut; stamens* 4*, didynamous.*

Seeds mucronate; *galea* compressed PEDICULARIA. 70.

I. 64. VERONICA. Fuchs. *Speedwell.*

Calyx 4-parted; *corolla* rotate, 4-lobed, unequal; *stamens* 2; *capsule* compressed, ovated, or rather heartshape. —*Stem* herbaceous, rarely shrubby; *leaves* opposite or verticillate, *flowers* spiked, terminal or axillary; or *leaves* alternate, *flowers* solitary, axillary.

a. *Spike terminal; leaves opposite; root perennial.*

1. *Veronica spicata.* *Spiked speedwell.*

Spike terminal; *leaves* opposite, oblong, crenate, blunt, not in the least cut at the tip; *stem* ascending.

Veronica spicata recta minor, *Raii Syn.* 279, 2.
Veronica recta minima, *Ger. em.* 627, 4.
Veronica erecta angustifolia, *Park.* 550.
Veronica spicata, *Lin. S. P.* 14.
Smallest fluellin. Smallest Paul's Betony.

Dry chalky pastures; perennial; July to September.

Stem 9 in. high, rather woody, downy; *leaves* crenulately serrate, hairy; *flowers* dark blue, mouth bearded.

β. *linearis. Leaves* linear, scarcely cut.

2. *Veronica hybrida.* *Mule speedwell.*

Spike terminal; *leaves* opposite, elliptical, blunt, unequally crenulately serrated; *stem* upright.

Veronica spicata Cambro-Britannica, bugulæ subhirsuto folio, *Raii Syn.* 278, 1.
Veronica hybrida, *Lin. S. P.* 14.
Veronica spicata β, *Huds. Fl. Angl.* 3.

Mountains; perennial; July.
Stem 18 in. high; *spikes* many.

3. *Veronica saxatilis.* *Rock speedwell.*
Spike corymbose, few-flowered; *leaves* elliptical, rather obtuse, scarcely cut; *sepales* rather blunt; *capsules* ovate, 4-valved; *stem* diffuse, rather shrubby.

Veronica fruticans serpillifolia, *Ger. em.* 628, 5.
Veronica saxatilis, *Lin. Supp. Pl.* 83.
Veronica fruticulosa, *Fl. Dan.* 342.
Shrubby fluellin.

Scotch alps; perennial; July.
Stem much branched; *branches* simple; *leaves* dark green; *flowers* 3 or 5, large, violet blue; mouth red; *peduncles* longer than the bracteæ.

4. *Veronica fruticulosa.* *Shrubby speedwell.*
Spike corymbose, loose, many-flowered; *leaves* lanceolate, ovate, rather toothed, pointed; *sepales* pointed; *capsules* ovate, 4-valved; *stem* rather shrubby, upright.

Veronica fruticulosa, *Lin. S. P.* 15.
Veronica frutescens, *Scop. Carn.*

Moist mountains; perennial; July.
Stem much branched, prostrate; *branches* upright, 9 in. high; *leaves* pale green; *spike* downy; *peduncles* the length of the bracteæ; *flowers* pale flesh-colour with purple lines.

5. *Veronica Alpina.* *Alpine speedwell.*
Spike crowded; *leaves* oblong, lanceolate, bald, acute, toothed or scarcely cut; *sepales* fringed; *stem* simple, upright, leafy.

Veronica Alpina, *Lin. S. P.* 15.

Alpine spongy bogs; perennial; July and August.
Stem 6 in. high; *leaves* 3-ribbed, dark green, shining; *flowers* blue, small; *capsule* elliptical, nicked, 2-valved.

6. *Veronica serpyllifolia.* *Thymeleaf speedwell.*
Spike loose; *leaves* ovate, bald, blunt, crenate; *bracteæ* leaflike, not cut; *capsule* reverse heartshape, shorter than the style; *stem* creeping at bottom.

Veronica pratensis minor, *Raii Syn.* 279, 3; *Park.* 551.
Veronica minor, *Ger. em.* 627, 2.
Veronica serpillifolia, *Lin. S. P.* 15.
Paul's betony. Little fluellin.

Fields and pastures; perennial; May and June.

Leaves petioled, shining, rather fleshy; *flowers* blue or flesh-colour, streaked with violet; *sepales* reverse ovate; *bracteæ* twice as long as the peduncle.

7. *Veronica humifusa.* *Ground speedwell.*

Spike short; *leaves* heartshape, roundish, slightly scalloped; *stem* prostrate.

Veronica Alpina, *Lightf. Scot.* 72.
Veronica humifusa, *Dick. T. L. S.* 2, 288.
Veronica serpillifolia β, *Smith Fl. Brit.* 19.

Mountains; perennial; June.

Stem only 3 in. high, creeping; *leaves* roundish, nearly sessile; *flowers* few, crowded, blue; *peduncles* short.

b. *Spike lateral; leaves opposite; root perennial.*

8. *Veronica fontinalis.* *Spring speedwell.*

Leaves ovate, very blunt, serrate, petioled; *stem* creeping.

Veronica aquatica rotundifolia, Beccabunga dicta, minor, *Raii Syn.* 280, 8.
Anagallis sive Beccabunga, *Ger. em.* 620, 1.
Anagallis aquatica vulgaris, sive Beccabunga, *Park.* 1236.
Veronica Beccabunga, *Lin. S. P.* 16.
Brook-lime.

Rivulets; perennial; June.

Leaves light green, shining, rather fleshy; *spikes* opposite, many-flowered; *bracteæ* linear, shorter than the peduncles; *flowers* blue; *capsules* twin.—Leaves eaten in sallads as an antiscorbutic.

9. *Veronica aquatica.* *Water speedwell.*

Leaves lanceolate, serrate, sessile; *stem* upright; *spikes* opposite.

Veronica aquatica longifolia media, *Raii Syn.* 280, 9.
Anagallis aquatica major, *Ger. em.* 620, 2.
Anagallis aquatica folio oblongo crenato, *Park.* 1237.
Veronica Anagallis-aquatica, *Lin. S. P.* 16.
Veronica Anagallis, *Smith Fl. Brit.* 20.
Great long-leaved brook-lime.

Bogs and ditch-sides; perennial; July.

Leaves pointed, bald, shining; *flowers* blue; *capsules* nearly twin.

10. *Veronica angustifolia.* *Narrow-leaved speedwell.*

Leaves linear, denticulate; *spikes* alternate; *peduncles* divaricated.

Veronica aquatica angustifolia minor, *Raii Syn.* 280, 10.
Veronica scutellata, *Lin. S. P.* 16.

Sandy bogs and inundations; perennial; July and Aug.

Stem weak, diffused; *flowers* small, blue, flesh-colour, streaked.

β. *pubescens.* *Stem* and *leaves* downy.

11. *Veronica montana.* *Mountain speedwell.*

Leaves ovate, petioled, serrate; *stem* hairy; *petioles* hairy; *spikes* alternate, loose, threadshape, few-flowered.

Veronica chamædryoides, foliis pediculis oblongis insidentibus, *Raii Syn.* 281, 12.
Veronica montana, *Lin. S. P.* 17.
Madwort.

Woods and hedges, chalky soils; perennial; May, June.

Stem weak; *leaves* shining; *flowers* pale blue streaked with purple; *capsules* margined, fringed.

12. *Veronica bibarbata.* *Two-bearded speedwell.*

Leaves ovate, sessile, wrinkled, cut, serrated; *stem* with 2 opposite rows of hairs; *spikes* opposite, many-flowerd.

Veronica Chamædrys sylvestris dicta, *Raii Syn.* 281.
Chamædrys sylvestris, *Ger. em.* 657, 3.
Chamædrys spuria sylvestris, *Park.* 107.
Veronica Chamædrys, *Lin. S. P.* 18.
Veronica bibarbata, *Stokes Bot. M. M.* 31.
Wild germander.

Fields and pastures; perennial; May.

Stem decumbent; *flowers* large, light contused-flesh colour; *capsules* reverse heartshape.—Leaves substituted for those of tea, more grateful than those of veronica officinalis.

13. *Veronica officinalis.* *Shop speedwell.*

Leaves reverse oval, toothed, hairy, rough; *stem* procumbent, hairy.

Veronica supina et vulgatissima, *Raii Syn.* 281, 2.
Veronica vera et major, *Ger. em.* 626, 1.
Veronica mas et supina, *Park.* 550.
Veronica officinalis, *Lin. S. P.* 14.
Fluellin. Speedwell.

Bare sandy places; perennial; May and June.

Stem diffuse; *spike* solitary, many-flowered; *flowers* light blue, veined.—Leaves substituted for those of tea, but are rather too astringent and bitter.

c. *Flowers solitary, axillary; leaves alternate; root annual.*

14. *Veronica verna.* *Vernal speedwell.*

Flowers solitary; *leaves* finger-parted; *peduncles* shorter than the leaves; *stem* upright, stiff.

Veronica verna, *Lin. S. P.* 17.

Dry fields; annual; April.

Stem 6 in. high, often much branched; *flowers* blue; sepales pointed.

15. *Veronica triphyllos.* *Three-leaved speedwell.*

Flowers solitary; *upper leaves* finger-parted; *peduncles* longer than the calyx; *seeds* flat.

Veronica flosculis singularibus, foliis laciniatis erecta, *Raii Syn.* 280, 6.
Alsine recta, *Ger. em.* 612, 5.
Veronica triphyllos, *Lin. S. P.* 19.
Upright chickweed.

Sandy fields; annual; April.

Stem much branched; *lower leaves* not cut; upper leaves nearly sessile, unequal, 3 to 5-lobed; *peduncles* long; *sepales* blunt, unequal; *flowers* dark blue; *capsule* nicked; *seeds* many, flat.—*Herb* dries black.

16. *Veronica arvensis.* *Cornfield speedwell.*

Flowers solitary; *leaves* ovate, heartshape, cut; *bracteæ* oblong, scarcely nicked; *seeds* many, flat; *stem* upright.

Veronica flosculis singularibus, cauliculis adherentibus, *Raii Syn.* 279, 5.
Alsine foliis veronicæ, *Ger. em.* 613, 7.
Alsine foliis subrotundis Veronicæ, *Park.* 762.
Veronica arvensis, *Lin. S. P.* 18.
Speedwell chickweed.

Dry fields and walls; annual; May.

Stem 6 in. high; *leaves* pale green; *sepales* lanceolate, pointed; *flowers* pale blue; *capsules* reverse heartshape; *seeds* elliptical.

17. *Veronica agrestis.* *Field speedwell.*

Flowers peduncled; *leaves* heartshape, ovate, broadly serrate; *peduncles* longer than the leaves; *stem* spreading, diffused; *seeds* many; umbilicus concave; outside wrinkled.

Veronica floris singularibus, in oblongis pediculis chamædryfolia, *Raii Syn.* 279, 4.
Alsine foliis trissaginis, *Ger. em.* 616, 1; *Park.* 764.
Veronica agrestis, *Lin. S. P.* 18.
Germander chickweed. *Henbit.*

Fields and pastures; annual; May to September.

Stem hairy; *leaves* nearly sessile; *flowers* small, light blue; *sepales* blunt, fringed; *capsules* twin, hairy.

18. *Veronica hederæfolia.* *Ivyleaved speedwell.*

Flowers peduncled; *sepales* heartshape; *peduncles* longer than the leaves; *leaves* heartshape, flat, 5-lobed; *seeds* 2 to 4 in each cell; umbilicus concave, outside wrinkled.

Veronica flosculis singularibus, hederulæ folio, *Raii Syn.* 281, 7.
Alsine hederacea, *Ger. em.* 616, 3.
Alsine hederulæ folio minor, *Park.* 762.
Veronica hederæfolia, *Lin. S. P.* 19.
Small henbit. Winter weed. Ivy chickweed.

Fields and cultivated places; annual; May to September.

Stem semiprostrate; *leaves* longly petioled; *sepales* broad, fringed, pointed; *flowers* pale blue; *capsules* twin.

II. 65. SIBTHORPIA. Hudson. *Pennywort.*

Calyx 5-parted; *corolla* nearly rotate; tube short; limb 5-lobed, nearly regular; *stamens* 4, distant, very short; *stigma* peltate; *capsule* compressed, orbicular, opening at the apex, 4-seeded.—*Herb* creeping, hairy, rooting; *leaves* alternate; *peduncles* capillary, solitary; *flowers* yellow.

Sibthorpia Europæa. *European pennywort.*

Leaves kidneyshape, rather peltate, crenate.

Alsine spuria pusilla repens foliis saxifragæ aureæ, *Raii Syn.* 352, 1.
Sibthorpia Europea, *Lin. S. P.* 880.
Sibthorpia prostrata, *Salisb. Icon.* 2, 6.
Cornish pennywort. Cornish moneywort.

Damp boggy places; perennial; July and August.

Stem prostrate, creeping, threadshape, rooting near the petioles; *leaves* petioled, horizontal; *peduncles* shorter than the leaves; *calyx* hispid; *corolla* purplish yellow.

III. 66. EUPHRASIA. Brunsfell. *Eyebright.*

Calyx cylindrical, 4-toothed, equal; *corolla* tubular, two-lipped; galea nicked; lip 3-lobed, lobes equal, 2-cut; *stamens* 4, didynamous; *lobes* of the lower anthers spinose; *capsule* ovate, oblong; *seeds* few, rather angular, striated.—*Leaves* opposite or alternate; *flowers* axillary.

Euphrasia officinalis. *Shop eyebright.*

Leaves ovate, linear, shortly toothed.

Euphrasia, *Raii Syn.* 282 *, 1; *Ger. em.* 663, 1.
Euphrasia vulgaris, *Park.* 1329.
Euphrasia officinalis, *Lin. S. P.* 841.

Meadows and pastures; annual; July to September.

Stem 8 in. high, purplish; *branches* racemose; *flowers* alternate, sessile, white with purplish lines; palate yellow; *capsule* nicked.—Herb weakly astringent, reputed ophthalmic.

IV. 67. ODONTITES. Tabernæmontanus. *Odontites.*

Calyx coloured, 4 rarely 5-cut; *corolla* tubular, two-lipped; galea not cut, straight, enclosing the anthers; lip 3-cut; lobes linear, equal, blunt; *anthers* bald, lobes spinose; *capsule* ovate, compressed, naked; *seeds* many, striated.—*Stem* 4-angular; *leaves* opposite, sessile; *bracteæ* leaflike; *flowers* spiked, one-sided.

Odontites rubra. *Red odontites.*

Stem much branched, pilose; *leaves* linear or lanceolate, serrate.

Euphrasia pratensis rubra, *Raii Syn.* 284 *, 2.
Cratæogonon Euphrosyne, *Ger. em.* 91, 3.
Euphrasia pratensis rubra major, *Park.* 1329, 3.
Odontites, *Rivini Monop. irr.* 90, 2.
Euphrasia Odontites, *Lin. S. P.* 841.
Bartsia Odontites, *Huds. Fl. Angl.* 268.
Wood chickweed. Eyebright cow-wheat.

Fields and pastures; annual; July and August.

Stem much branched; *leaves* rough; *spikes* many-flowered; *flowers* rose-colour; *capsules* hairy.

V. 68. BARTSIA. Linnæus. *Painted-cup.*

Calyx tubular, not bellied, 4-cut, unequal, coloured at the tip; *corolla* tubular, 2-lipped; galea concave, long, not cut; lower lip reflexed, 3-cut; lobes equal, not cut; *stamens* 4, didynamous; *anthers* tomentose; *capsule* ovate, compressed; *seeds* many, angular.—*Leaves* alternate and opposite; *flowers* alternate, bracteate, spiked or terminal.

1. *Bartsia Alpina.* *Alpine painted-cup.*

Leaves opposite, heartshape, ovate, bluntly serrated.

Euphrasia rubra Westmorlandica, foliis brevibus obtusis, *Raii Syn.* 285 *, 3.
Clinopodium Alpinum, *Ger. em.* 676, 6.
Bartsia alpina, *Lin. S. P.* 839.
Wild basil of the Alps. Poley mountain.

Alpine rivulets; perennial; July.

Root creeping; *stem* simple; *leaves* sessile; *bracteæ* coloured: *spike* purple, terminal; *calyx* viscid, purple; *flowers* purplish violet; *capsule* pubescent; *seeds* winged at the angles, striated.

2. *Bartsia viscosa.* *Viscous painted-cup.*

Pubescent; *stem* simple; *leaves* lanceolate, pointed, serrated; lower leaves opposite; *flowers* lateral, distant.

Euphrasia major lutea latifolia palustris, *Raii Syn.* 285 *, 4.
Bartsia viscosa, *Lin. S. P.* 839.

Bogs; annual; July and August.

Stem round, upright; *leaves* sessile, veined; *flowers* nearly sessile, yellow, lobes blunt; *calyx* villous; *capsule* roundish; *seeds* not winged.

VI. 69. RHINANTHUS. Linnæus. *Rattle.*

Calyx bellied, 4-cut; *corolla* tubular, 2-lipped; galea arched, compressed; lip flat, 3-lobed; lobes equal; *stamens* 4, didynamous; *anthers* hirsute; *capsule* scariose, compressed, blunt, covered by the calyx; *seeds* many, imbricate, compressed, flat, winged.—*Leaves* opposite, sessile; *flowers* opposite, bracteated, spiked, terminal, yellow.

Rhinanthus glaber. *Smooth rattle.*

Leaves lanceolate, acutely serrated; *calyx* bald.

Pedicularis seu crista galli lutea, *Raii Syn.* 284 *, 1; *Park.* 713.
Crista Galli, *Ger. em.* 1071.
Rhinanthus Crista-galli, *Lin. S. P.* 840.
Yellow rattle. White rattle. Cockscomb. Penny-grass.

Fields and pastures; annual; June.

Stem much branched, smooth, often spotted; *flowers* rough, heartshape at bottom; *calyx* reticulately veined; *peduncles* short.

β. *major.* *Plant* large; *leaves* narrow; *stem* much branched; *flowers* small, yellow; lip purple.

Pedicularis major angustifolia ramosissima, flore minore luteo, labello purpureo, *Dillen in Raii Syn.* 284 *, 2.

VII. 70. PEDICULARIA. Tragus. *Lousewort.*

Calyx bellied, 5-cut; *corolla* tubular, 2-lipped; galea compressed, often nicked; lip 3-lobed, flat, spreading; lobes equal, or the middle smallest; *stamens* 4, didynamous; *capsule* compressed, mucronated, often oblique and longer than the calyx; *seeds* few, angular, mucronate.—*Leaves* opposite or alternate, mostly pinnatifid; *flowers* opposite or alternate, bracteated, spiked, terminal.

1. *Pedicularia palustris.* *Marsh lousewort.*

Stem much branched; *leaves* pinnate; pinnæ lanceolate, pinnatifidly toothed; *calyx* ovate, inflated, 2-parted, crested; *galea* obtusely truncated.

Pedicularis palustris rubra elatior, *Raii Syn.* 284 *, 4.
Pedicularis palustris, *Lin. S. P.* 845.
Tall red rattle.

Bogs and damp pastures; perennial; June and July.
Root fibrous; *stem* 18 in. high, angular; *leaves* spread; *flowers* large, purple; *calyx* rather leaflike; *galea* slightly nicked; *lobes* of the lip round, fringed.

2. *Pedicularia sylvatica.* *Wood lousewort.*
Stem much branched at the bottom, simple above; *leaves* pinnate; *pinnæ* ovate, acutely toothed; *calyx* oblong, inflated, unequally 5-cut, crested; *galea* blunt, truncated, acutely 2-toothed.

Pedicularis pratensis rubra vulgaris, *Raii Syn.* 284 *, 3; *Park.* 713.
Pedicularis, *Ger. em.* 1071, 1.
Pedicularis sylvatica, *Lin. S. P.* 845.
Lousewort. Red rattle. Rattle grass.

Pastures; perennial; June and July.
Root fusiform; stem 9 in. high, erect; *branches* spreading; *leaves* radical, simple, ovate; *flowers* large, rose-colour; *lip* of the corolla unequally 3-cut; edge bald.—Juice, or decoction, a good injection for sinuous ulcers: farmers suppose it renders sheep scabby, overrun with vermin, and makes their wool loose.

VIII. 71. MELAMPYRUM. Theophrastus. *Cow-wheat.*
Calyx tubular, 4-cut; *corolla* tubular, 2-lipped, compressed; galea arched, edge replicate; lip furrowed, 3-cut; *stamens* 4, didynamous; *capsule* oblong, obliquely pointed, compressed; cells 2-seeded, gibbous, smooth.—*Leaves* opposite; *flowers* opposite, spiked, terminal; *bracteæ* leaflike, edge of the base crested.

1. *Melampyrum cristatum.* *Crested cow-wheat.*
Spike 4-angular; *bracteæ* heartshape, compact, imbricate, toothed.

Melampyrum cristatum, flore albo et purpureo, *Raii Syn.* 286 *, 1.
Melampyrum cristatum, *Lin. S. P.* 842.
Crested cow-wheat.

Woods and cornfields; annual; July.
Stem rough, 4-angular; *leaves* linear, not cut; *spike* solitary, many-flowered; *bracteæ* compressed, coloured, pectinately toothed.

2. *Melampyrum arvense.* *Corn-field cow-wheat.*
Spike conical, lax; *bracteæ* lanceolate, pinnately toothed; teeth coloured, setaceous; *teeth* of the calyx rough.

Melampyrum purpurascente coma, *Raii Syn.* 286 *, 3.
Melampyrum cæruleum, *Ger. em.* 90, 3.
Melampyrum arvense, *Lin. S. P.* 842.
Blue cow-wheat. Purple cow-wheat.

Sandy fields; annual; July.

Stem 2 feet high, much branched, upright; *leaves* lanceolate, not cut; *spike* many-flowered; *bracteæ* spreading, purple; *corolla* closed; apex purple.

3. *Melampyrum vulgatum.* *Common cow-wheat.*

Flowers axillary, one-rowed, conjugately remote; *corolla* closed; *lip* porrected; *calyx* rather coloured; lobes ascending; *stem* much branched.

Melampyrum sylvaticum flore luteo, sive satureja lutea sylvestris, *Raii Syn.* 286 *, 2.
Cratæogonon album, *Ger. em.* 91, 1.
Cratæogonon vulgare, *Park.* 1326, 1.
Melampyrum pratense, *Lin. S. P.* 843.
Melampyrum vulgatum, *Pers. Syn.* 151.

Woods and hedges; annual; July and August.

Stem smooth; *leaves* lanceolate; *bracteæ* pinnatifid; *tube* of the corolla white; mouth closed, yellow; palate fulvous.

β. album. *Corolla* white, with 2 yellow spots on the lower lip.

Melampyrum latifolium flore albo, labio inferiore duabus maculis luteis distincto, *Dillen in Raii Syn.* 286 *, 2.

4. *Melampyrum alpestre.* *Alp cow-wheat.*

Flowers axillary, 1-rowed, conjugately remote; *corolla* open; lip deflexed; galea hirsute; *leaves* linear; 2 lower ones reverse-ovate.

Melampyrum sylvaticum, *Lin. S. P.* 843.
Melampyrum alpestre, *Pers. Syn.* 151.

Alpine woods and pastures; annual; July and August.

Stem not much branched, roughish; *leaves* not cut; *flowers* small; *lobes* of the calyx broad at the bottom; *corolla* yellow, mouth fulvous.

Fam. VI. 23. OROBANCHEÆ. Link. *Pedicularibus affines*, Jussieu. *Rhinanthacearum sectio*, De Candolle.

Calyx divided, persistent, tubular; *corolla* hypogynous, ringent; *stamens* 4, inserted on the corolla, didynamous; *anthers* 2-celled; *ovary* free, 1-celled, glandular at the base; *style* simple; *stigma* 2-lobed; *capsule* 2-valved, 1-celled; valves distinct; placentarium longitudinal, on the middle

of the valves; *seeds* numerous, minute; spermodermis simple, fungous; perisperm fleshy; corculum subglobose, excentric; cotyledons very short; radicle centrifugal.—*Herb* rather fleshy, mostly parasitic on the root of other plants; *root* tuberous, scaly, imbricate; *stem* alternately scaly, mostly simple; *flowers* bracteated, spiked, terminal.

Calyx 2-parted; lobes 2-cut ..... OROBANCHE. 72.
Calyx 4-cut, bellshape..... LATHRÆA. 73.

I. 72. OROBANCHE. Theophrastus. *Broomrape.*

Calyx 2-parted; lobes 2-cut; *corolla* tubular, 2-lipped, 4 or 5-lobed; *stamens* 4, didynamous.—*Herb* light-brown, simple; *bractea* 1 or 3 to each flower.

a. *Bractea* 1 *to each flower; corolla* 4-*lobed.*

1. *Orobanche major.* *Great broomrape.*

Stem quite simple; *corolla* 4-cut, inflated; *lobes* of the lip equal, acute; *stamens* below bald; *stigma* 2-lobed; lobes distant; *style* above pubescent.

Orobanche major garyophyllum olens, *Raii Syn.* 288 *, 1.
Rapum genistæ, sive Orobanche, *Ger. em.* 1311, 2; *Park.* 229.
Orobanche major, *Lin. S. P.* 882.

Sterile places on leguminous plants; perennial; June and July.

Root rather tuberose; *stem* 1 foot high, pubescent; *spike* many-flowered; *flowers* scentless.

2. *Orobanche elatior.* *Tall broomrape.*

Stem not branched; *corolla* 4-cut, tubular; lobes equal, acute; *filaments* downy beneath; *stigma* reverse-heartshape; *style* bald above.

Orobanche elatior, *Sutton T. L. S.* 4, 178.
Orobanche amethystea, *Thuill. Fl. Par.*

Margin of fields; perennial; July and August.

Herb yellowish; *spike* many-flowered, close; *stigma* yellow.

3. *Orobanche minor.* *Small broomrape.*

Stem not branched; *corolla* 4-cut, tubular; *middle lobe* 3-cut; *filaments* fringed beneath; *style* bald above.

Orobanche flore minore, *Dillen in Raii Syn.* 288 *, 2; *Park.* 1363.
Orobanche minor, *Eng. Bot.* 422.

Clover fields; annual; July and August.

Herb pale purplish; *stem* rather bent; *stigma* purple.

b. *Bractea* 1 *to each flower; corolla* 5-*lobed.*

4. *Orobanche rubra.* *Red broomrape.*

Stem not branched; *corolla* tubular; galea cloven; lip equally 3-lobed; *filaments* fringed at bottom; *style* fringed above.

Orobanche rubra, *Eng. Bot.* 1786.

Basalt rocks; perennial; August.

Root creeping; *herb* purplish red; *stem* a foot high; *spike* 20-flowered; *flowers* glandular, hairy; *bracteæ* pointed; *lobes* of the calyx undivided; *style* red, sweet-scented.

c. *Bracteæ* 3 *to each flower; corolla* 5-*lobed.* Gymnocaulis.

5. *Orobanche cærulea.* *Blue broomrape.*

Stem seldom branched; *corolla* tubular; galea 2-lobed, cut; *calyx* 4-cut, tubular.

Orobanche flore majore, *Ger. em.* 1312.
Nidus avis flore et caule violaceo purpureo colore, *Ger. em.* 228.
Orobanche ramosa β, *With. Bot. Arr.* 508.
Orobanche purpurascens, *Gmel. Syst. Nat.* 954.
Orobanche purpurea, *Jacq. Austr.* 2176.
Orobanche lævis, *Lamarcke Fl. Fr.* 2, 327.
Orobanche cærulea, *Villar's Dauph.* 2, 406.
Large-flowered broomrape.

Mountainous pastures; perennial; July.

Stem straight, bluish; *spike* few-flowered, loose; *flowers* bluish-violet, palate white; *stamens* bald; *style* downy; *stigma* yellowish.

β. *ramosa.* *Stem* branched.

6. *Orobanche ramosa.* *Branched broomrape.*

Stem branched; *corolla* 5-cut, lobes blunt, not in the least cut; *calyx* short, deeply 4-cut.

Orobanche ramosa, *Dillen in Raii Syn.* 288 *, 3; *Park.* 1363; *Ger. em.* 1312; *Lin. S. P.* 882.

Hemp-fields; annual; August and September.

Stem 1 foot high; *spike* many-flowered, pointed; *flowers* purplish-blue, tube yellowish; *stamens* rather fringed; *style* rather bald; *stigma* white.

II. 73. LATHRÆA. Linnæus. *Toothwort.*

Calyx bellshape, 4-cut; *corolla* tubular, 2-lipped; galea 2-cut; lip 3-cut; *stamens* 4, didynamous; *anthers* hirsute; *stigma* nicked; *seeds* globose. — *Root* scaly; scales close, imbricated; *stem* not branched, purplish; *bractea* 1 to each flower; *flowers* pedicelled.

Lathræa simplex. *Branchless toothwort.*
Stem not branched; *flowers* peduncled.

Anblatum Cordi sive aphyllon, *Raii Syn.* 288 *.
Dentaria major Matthioli, *Ger. em.* 1585, 1.
Squamaria, *Rivini Monop. irr.* 89, 5.
Lathræa Squamaria, *Lin. S. P.* 844.
Clown's lungwort.

Dry woods, on hazel and elm; perennial; April.

Root white; scales heartshape; *stem* upright, 9 in. high, downy; *bracteæ* ovate, bald; *calyx* white; *limb* of the corolla purple; *tube* white.—Used as a pectoral by country people.

Fam. VII. 24. LENTIBULARIÆ. Richard. *Utricularieæ*, Hoffmansegg and Link. *Lysimachiis affines*, Jussieu. *Personatarum sectio*, De Candolle.

Calyx divided, persisting; *corolla* monopetalous, hypogynous, irregular, spurred, 2-lipped; *stamens* 2, enclosed at the tooth of the corolla; *anther* simple or contracted in the middle; *ovary* 1-celled; *style* 1, very short; *stigma* two-lipped; *seeds* small; perisperm fleshy; cotyledons sometimes only 1?—*Herb* aquatic or marsh; *leaves* radical, undivided, fleshy, or compound rootshape and bladdery; *scape* naked, or covered with minute scalelike or bladderlike stipules, often undivided, 1 or many-flowered; *bractea* 1 to each flower, or none.

Calyx 2-parted; *lower lip* not cut ... Utricularia. 74.
Calyx 5-cut, bellshape; *lower lip* 2-lobed
Pinguicula. 75.

I. 74. UTRICULARIA. Linnæus. *Bladder-snout.*

Calyx 2-leaved; *lips* equal, undivided; *corolla* personate, upper lip sometimes nicked; lower lip large, not nicked, spurred at the base; *stamens* 2; *stigma* 2-lipped.—*Plant* herbaceous, aquatic, free; *leaves* rootshape, under water, many-cut, with many bladders full of air while flowering, and of water before and after; *scape* leafless; *flowers* spiked or solitary, yellow.

1. *Utricularia vulgaris.* *Common bladdersnout.*
Stem conical; *scape* few-flowered; *upper lip* of the corolla as long as the palate, not nicked; *leaves* pinnatifidly many-cut; *lobes* hairlike.

Lentibularia, *Raii Syn.* 288 *, 1.
Millefolium palustre galericulatum, *Ger. em.* 828, 5.
Millefolium aquaticum flore luteo galericulato, *Park.* 1258.
Utricularia vulgaris, *Lin. S. P.* 26.
Hooded water-milfoil.

Stagnant waters and bogs; perennial; July.

Herb much branched; *scape* upright; *spike* 3 to 8-flowered; *flowers* large, golden-yellow with red lines; *nectary* bent, nearly as long as the lips.

2. *Utricularia intermedia.* *Intermediate bladdersnout.*

Spur conical; *scape* 3 or 4-flowered; *upper lip* of the corolla flattened, not cut, double the length of the palate; *leaves* crowded, 3-parted; lobes hairlike, forked.

Utricularia intermedia, *Heyne in Schrad. Journ.* 18, 5.
Utricularia minor, *Fl. Danica*, 128.

Irish lakes; perennial; July.

More leafy, and less bladdery, than utricularia vulgaris.

3. *Utricularia minor.* *Small bladdersnout.*

Spur keeled, blunt, very short; *upper lip* of the corolla nicked, as long as the palate; *leaves* 3-parted; lobes hairlike, forked.

Lentibularia minor, *Raii Syn.* 286 *, 2.
Utricularia minor, *Lin. S. P.* 26.
Small hooded-milfoil.

Ditches and bogs; perennial; July.

Herb slender; *flowers* small, pale.

II. 75. PINGUICULA. Gesner. *Butterwort.*

Calyx bellshape, 5-cut; *corolla* 2-lipped, upper lip three-lobed; lower lip shorter, 2-lobed, spurred at the base; *stamens* 2; *stigma* 2-lipped. — *Leaves* radical, fat; *scape* 1-flowered; *flowers* purplish.

1. *Pinguicula vulgaris.* *Common butterwort.*

Spur conical, obtuse, straight, the length of the corolla; *upper lip* 2-lobed; lower 3-parted; *scape* bald; *capsule* ovate.

Pinguicula Gesneri, *Raii Syn.* 281 *, 1.
Pinguicula sive sanicula Eboracensis, *Ger. em.* 788, 2; *Park.* 532.
Pinguicula ovata, *Stokes Bot. Mat. Med.* 37.
Yorkshire sanicle. Butter root. White root.

Spongy bogs and damp heaths; perennial; May, June.

Leaves bald, slightly involute; *limb* of the corolla unequal. — Warm rein-deer milk strained through the leaves,

and left for a day or two to turn sour, is coagulated without any separation of cream or curd, but not cow's milk; juice kills lice, and heals chaps in cows' udders.

2. *Pinguicula Lusitanica.* *Portuguese butterwort.*
Spur conical, subulate; *scape* drooping, downy; *leaves* reticulately veined; *capsules* globose.

Pinguicula flore minore carneo, *Raii Syn.* 281.
Pinguicula Lusitanica, *Lin. S. P.* 25.

Marshes; perennial; June and July.
Leaves pale green, downy, lasting all the winter; *veins* red; *flowers* flesh-colour; limb regular.

3. *Pinguicula grandiflora.* *Large-flowered butterwort.*
Spur awlshape, straight, as long as the corolla; *upper lip* of the corolla spreading, nicked, very large; lower lip 3-lobed.

Pinguicula grandiflora, *Lamarck Encyc. Meth.* 3, 21.

Marshes in Ireland; perennial; May.
Leaves much larger than those of pinguicula vulgaris, more veiny and yellower; *scape* 9 in. high; *flowers* reticulated with dark blue veins.

Fam. VIII. 25. SCROFULARINÆ, Link. *Personatæ*, De Candolle. *Scrophulariæ*, Jussieu. *Scrophularinarum pars*, Brown. *Antirrhinæ*, Persoon.

Calyx divided, persisting; *corolla* irregular; limb divided, mostly 2-lipped; *stamens* 4, didynamous, inserted in the corolla; *ovary* free; *style* 1; *stigma* simple or 2-cut; *capsule* 2-celled, 2-valved; valves concave, more or less separated from one another, sometimes 2-parted; dissepiments central, parallel with the valves, sometimes simple and free; sometimes double, formed of the united introflected valves; *seeds* many, on the middle of the dissepiments; perisperm fleshy; corculum straight; cotyledons half-round.—*Stem* herbaceous; *leaves* opposite or alternate; *flowers* bracteated.

Cor. small, bellshape, equally 5-lobed;
stigma globose; *capsule* half 2-celled .... LIMOSELLA. 76.
Cor. bellshape, unequally 4-lobed;
stigma simple; *capsule* 2-celled ..... DIGITALIS. 82.

Cor. 2-lipped; 4 or 5-lobed; *stigma* 1; *dissepiments* double ..... SCROFULARIA. 77.
Cor. personate, spurred; *pyxidium* 2-celled; *seeds* wrinkled; *leaves* ovate ..... ELATINE. 78.
Cor. personate, spurred; *capsule* opening by 2 rents; *seeds* wrinkled; *leaves* angular ..... CYMBALARIA 79.
Cor. personate, spurred; *capsule* opening by 2 rents; *seeds* compressed; winged; *leaves* linear ..... ANTIRRHINUM. 80.
Cor. personate, spurless; *capsule* opening by 3 holes; *leaves* linear ..... ORONICUM. 81.

I. 76. LIMOSELLA. Linnæus. *Mudwort.*

Calyx 5-cut, equal; *corolla* short, bellshape, 5-cut, equal; *stamens* 4 with 2 very slightly shortened, or only 2; *stigma* capitate; *capsule* half 2-celled, 2-valved; valves not nicked; dissepiments incomplete.—*Herb* very small, marsh, creeping; *leaves* bundled; *petioles* dilated, rather sheathing at the base; *scape* 1-flowered; *bractea* 0.

Limosella aquatica. *Water mudwort.*

Leaves lanceolate, spathulate; *scape* shorter than the leaves.

Plantiginella palustris, *Raii Syn.* 278.
Plantago aquatica minima Clusii, *Park.* 1244.
Limosella aquatica, *Lin. S. P.* 881.

Dried-up ponds and stagnant pools; annual; July, Aug.

Root fibrous; *stolones* creeping; *leaves* upright, acute, not cut, bald; *scape* becoming reflexed; *flower* flesh-colour; *calyx* pointed.

II. 77. SCROFULARIA. Brunsfell. *Figwort.*

Calyx 5-lobed; *corolla* globose; limb contracted; 2-lipped; upper lip 2-lobed with a scale on the middle of the inside; lower lip short, 3-lobed; *stigma* 1; capsule roundish, pointed; valves not cut, introflected at the bottom; dissepiments double. — *Stem* herbaceous, angular; *leaves* mostly opposite; *peduncles* 2 or many-flowered; *bracteæ* 2 at the divisions; *flowers* opposite, axillary or terminal, spiked.

1. *Scrofularia nodosa.* *Knotty figwort.*

Leaves heartshape, lanceolate, acute, toothed; 3-ribbed at the base; *stem* acute-angled; *racemes* terminal.

Scrophularia major, *Raii Syn.* 283 *, 2; *Ger. em.* 716, 1.
Scrophularia vulgaris, *Park.* 610.
Scrophularia nodosa, *Lin. S. P.* 863.
Great figwort. Kernel wort. Brown wort.

Wood and hedges; perennial; July.

Root granulated; *stem* 3 feet high, upright, simple; *leaves* petioled; *spikes* terminal, forked; *flowers* blackish blood-colour.—Its rank smell and bitter taste indicate it to have some active qualities: a decoction of the leaves is used as a wash for the scab in swine.

2. *Scrofularia aquatica.* *Water figwort.*

Leaves heartshape, blunt, serrated, petioled; *stem* membranaceously winged; *racemes* terminal.

Scrophularia aquatica major, *Raii Syn.* 283 *, 1.
Betonica aquatica, *Ger. em.* 715, 1.
Betonica aquatica major, *Park.* 613.
Scrophularia aquatica, *Lin. S. P.* 864.
Water betony. Brown wort. Bishop's leaves, Yorkshire.

Watery places; perennial; July.

Root fibrous; *stem* 4 feet high; *racemes* mostly solitary, upright; *flowers* blackish blood-colour.

3. *Scrofularia scorodonifolia.* *Sage-leaf figwort.*

Leaves heartshape, doubly serrated, beneath tomentose; *racemes* terminal, 3-forked, leafy.

Scrophularia scorodoniæ folio, *Raii Syn.* 283 *, 3.
Scrophularia scorodonia, *Lin. S. P.* 865.

Watery places and fields; perennial; July and August.

Calyx hairy; *flowers* paler than those of S. aquatica.

4. *Scrofularia lutea.* *Yellow figwort.*

Leaves heartshape, acutely and doubly serrated, downy; *peduncles* axillary, solitary, forked, leafy.

Scrophularia flore luteo, *Ger. em.* 717, 3.
Scrophularia vernalis, *Lin. S. P.* 864.
Spring figwort.

Watery places and hedges; biennial; April and May.

Stem 4-angular, hairy; *leaves* petioled, pointed; *peduncles* as long as the leaves, many-flowered; *flowers* crowded, yellow, bellied.

III. 78. ELATINE. Dioscorides. *Fluellin.*

Calyx 5-sepaled; sepales lanceolate, acute; *corolla* personate, spurred; upper lip 2-cut, reflexed; lower lip 3-cut; mouth closed; palate gibbous; *stamens* 4, didynamous; *stigma* simple; *capsule* globose, 2-celled; cells obliquely cut round; valve circular, from the upper part of each cell; *seeds* oblong, wrinkled.—*Stem* prostrate, weak; *leaves* petioled, penninerved.

1. *Elatine hastata.* *Sharp-pointed fluellin.*

Upper leaves hastate; lower leaves oval, alternate; *peduncles* bald.

Linaria Elatine dicta, folio acuminato, *Raii Syn.* 282*, 5.
Elatine altera, *Ger. em.* 625, 2.
Elatine folio acuminato, *Park.* 553.
Antirrhinum Elatine, *Lin. S. P.* 851.
Elatine hastata, *Moench Meth.* 523.

Fields; annual; July to September.

Leaves hairy; *sepales* lanceolate; *corolla* yellow, throat violet-colour, spur pale.

β. *purpurea.* *Corolla* violet.

γ. *regularis.* *Corolla* regular, 5-cut; *spurs* 5.

2. *Elatine ovata.* *Round-leaved fluellin.*

Leaves ovate, alternate, hairy; *lower leaves* opposite, slightly toothed; *peduncles* villose.

Linaria Elatine dicta, folio subrotundo, *Raii Syn.* 282*, 6.
Veronica fœmina Fuchsii, sive Elatine, *Ger. em.* 625, 2.
Elatine folio subrotundo, *Park.* 553.
Antirrhinum spurium, *Lin. S. P.* 851.
Elatine ovata, *Moench Supp.* 171.
Female fluellin.

Fields; annual; July to September.

Branches hairy; *peduncles* longer than the leaves; *flowers* yellow, upper one violet.

β. *regularis.* *Flowers* regular, 5-cut.

IV. 79. CYMBALARIA. Matthioli. *Bastard navel-wort.*

Calyx 5-sepaled; *corolla* personate, spurred; galea 2-cut, reflexed; lip 3-cut, mouth closed; palate prominent, two-lobed; *stamens* 4, didynamous; *style* 1; *stigma* simple; *capsule* valveless, 2-celled, opening by a rent at the top of each cell; *seeds* wrinkled, angular.—*Stem* prostrate, weak; *leaves* alternate, fleshy, palmately ribbed; *peduncles* axillary, 1-flowered.

Cymbalaria hederacea. *Ivy bastard-navelwort.*
Leaves heartshape, 5-lobed, bald.

Linaria hederaceo folio glabro, seu Cymbalaria vulgaris, *Dillen in Raii Syn.* 282 *, 4.
Cymbalaria Italica, *Ger. em.* 529, 6.
Antirrhinum Cymbalaria, *Lin. S. P.* 851.
Antirrhinum 5-lobum, *Stokes Bot. Mat. Med.* 385.
Elatine Cymbalaria, *Moench Meth.* 522.
Cymbalaria, *Rivinus Mon. irreg.* 186.
Italian bastard-navelwort.

Old walls; perennial; May to November.
Stem rooting, bald; *leaves* petioled, fleshy; beneath purplish; *corolla* violet, palate yellow; spur short.

V. 80. ANTIRRHINUM. Theophrastus. *Toad-flax.*

Calyx 5-sepaled; *corolla* personate, spurred; galea 2-cut, reflexed; lip 3-cut; mouth closed, palate prominent; *stamens* 4, didynamous; *style* 1; *stigma* simple; *capsule* ovate, valveless, 2-celled, opening by a rent at the top of each cell; *seeds* compressed, edged.—*Stem* mostly upright; *leaves* not cut; *flowers* generally spiked.

a. *Leaves alternate; spur long, pointed.*

1. *Antirrhinum vulgare.* *Common toad-flax.*
Leaves lanceolate, linear, crowded; *stem* upright, spiked; *calyx* bald, much shorter than the spur.

Linaria lutea vulgaris, *Raii Syn.* 281 *, 1; *Ger. em.* 550.
Linaria vulgaris nostras, *Park.* 458.
Antirrhinum Linaria, *Lin. S. P.* 858.
Linaria vulgaris, *Moench Meth.* 528.
Osyris, *Fuchsii Hist.* 545.
Great toad-flax. Yellow toad-flax. Butter and eggs.

Fields and pastures; perennial; June and July.
Roots creeping; *stem* scarcely branched; *leaves* spread, bald, rather glaucous; *spike* many-flowered, close; *flowers* gold-yellow; palate villous, fulvous. — Juice mixed with milk a poison to flies; leaves in infusion diuretic and purgative; in ointment useful in the piles.

β. *regulare.* *Corolla* 5-cut, regular; 5-spurred; *stamens* 5, equal in length.

Peloria, *Lin. Amœn. Ac.* 1, 3.

γ. *album.* *Corolla* nearly white.

δ. *bicalcaratum.* *Corolla* irregular, 2-spurred.

b. *Lower leaves in whirls; spur pointed, longer than the sepales.*

2. *Antirrhinum repens.* *Creeping toad-flax.*

Leaves linear, glaucous; upper leaves crowded, alternate, spread; lowest leaves in whirls; *stem* panicled, nearly upright; *root* creeping; *flowers* streaked; *calyx* bald, as long as the capsule and spur.

Linaria cærulea foliis brevioribus et angustioribus, *Raii Syn.* 282 *, 3.
Linaria odorata Monspessulana, *Raii Syn.* 282 *, 4.
Antirrhinum repens, *Lin. S. P.* 854.
Antirrhinum Monspessulanum, *Lin. S. P.* 854.
Antirrhinum striatum, *Lamarck Encycl. Meth.* 4, 149.
Linaria decumbens, *Moench Meth.* 523.
Blue toad-flax.

Chalky hills; perennial; July to September.

Root creeping; *stem* decumbent at the base; *leaves* upright, 4 or 5 in a whirl; *branches* panicled, alternate, spiked; *flowers* sweet-scented; *corolla* greenish white; *upper lip* streaked with purple; *seeds* angular.

β. *regulare.* *Flowers* regular, 5-cut, 5-spurred.

3. *Antirrhinum arvense.* *Field toad-flax.*

Leaves linear, bald; *lower leaves* in whirls of 4; *calyx* pilose, viscid; *flowers* racemose; *spur* recurved; *stem* upright, branched.

Antirrhinum arvense, *Lin. S. P.*
Linaria comosa, *Moench Meth.* 523.

Sandy corn-fields; annual; July and August.

Leaves bald; *flowers* small, blue; *bracteæ* recurved.

β. *luteum.* *Flowers* yellow.

Settle in Yorkshire. *Withering Bot. Arr.*

c. *Lower leaves opposite; spur blunt, shorter than the sepales.*

4. *Antirrhinum minus.* *Small toad-flax.*

Leaves lanceolate, blunt, elliptical, alternate; *lower leaves* opposite; *stem* very much branched, diffuse; *calyx* longer than the spur.

Linaria Antirrhinum dicta, *Raii Syn.* 283 *, 7.
Antirrhinum minimum repens, *Ger. em.* 549, 5.
Antirrhinum sylvestre minimum, *Park.* 1334.
Antirrhinum minus, *Lin. S. P.* 852.
Linaria viscida, *Moench. Meth.* 523.
Small creeping snapdragon.

Sandy corn-fields; annual; June to August.

Stem pubescent; *leaves* viscid; *peduncles* axillary, one-flowered, as long as the leaves; *sepales* hairy, nearly as long as the corolla; *corolla* violet; lip white; palate yellow.

VI. 81. ORONTIUM. Dodonæus. *Snapdragon.*

Calyx 5-sepaled, 2 lower sepales distant; *corolla* personate, spurless, gibbous at the base; tube inflated; *limb* 2-lipped; *galea* 2-cut, reflexed; *lip* 3-lobed; *palate* prominent closing the mouth; *capsule* oblique at the base, opening often in 3 holes, 1 in the upper, and 2 in the lower cell; *seeds* oval, convex on one side, and concave on the other, edged.—*Stem* erect; *leaves* linear; *flowers* rather spiked.

1. *Orontium arvense.* *Field snapdragon.*

Leaves lanceolate, slender; *flowers* rather spiked; *sepales* linear, longer than the corolla; *stem* and *peduncle* hirsute.

Antirrhinum angustifolium sylvestre, *Raii Syn.* 283 *.
Antirrhinum minus, *Ger. em.* 549, 4.
Antirrhinum sylvestre minimum, *Park.* 1334.
Antirrhinum Orontium, *Lin. S. P.* 860.
Orontium arvense, *Persoon Syn.* 2, 159.
Antirrhinum craniolaris, *Stokes Bot. Mat. Med.* 283.
Antirrhinum humile, *Salisb. Prod.* 98.
Small snapdragon.

Chalky and sandy fields; annual; July and August.

Stem upright, much branched, hairy; *leaves* bald; *flowers* nearly sessile; *sepales* unequal; *corolla* flesh-colour; *galea* and *lip* rose-colour; *palate* yellow; *capsule* dotted.—Poisonous.

β. *album.* *Corolla* white; *galea* and *lip* violet.

2. *Orontium majus.* *Great snapdragon.*

Leaves lanceolate, spiked; *sepales* ovate, obtuse, hairy; hairs glandular.

Antirrhinum purpureum sive album, *Ger. em.* 549, 2.
Antirrhinum majus, *Lin. S. P.* 859.
Antirrhinum grandiflorum, *Stokes Bot. M. M.* 384.
Antirrhinum murale, *Salisb. Prod.* 100.
Orontium majus, *Persoon Syn.* 159.

Old walls; perennial; July and August.

Stem seldom branched; *leaves* bald; *spike* terminal; *flowers* close; *corolla* very large, rose-colour; palate yellow.

β. *album.* *Corolla* white.

VII. 82. DIGITALIS. Gesner. *Foxglove.*

Calyx 5-sepaled; sepales unequal; *corolla* bellshape, bellied; limb oblique, 4 or 5-lobed; lobes unequal; *stigma* simple; *capsule* ovate, pointed, 2-celled; dissepiments double from the inflected edges of the valves; *seeds* very numerous, rather prismatic. — *Leaves* alternate; *flowers* spiked, terminal.

Digitalis speciosa. *Handsome foxglove.*

Sepales ovate, acute; *lobes* of the corolla blunt; upper lobe not cut; *leaves* ovate, lanceolate, wrinkled, pubescent.

Digitalis purpurea, *Raii Syn.* 283 *; *Ger. em.* 790, 1; *Lin. S. P.* 866.
Digitalis purpurea vulgaris, *Park.* 653.
Digitalis speciosa, *Salisb. Prod.* 100.

Woods; perennial; June and July.

Stem 4 feet high, upright, downy; *leaves* petioled, crenate; *spike* upright, many-flowered; *flowers* purple and white, with blood-coloured spots and hairs.—The old authors recommend it as a pulmonary and epileptic medicine boiled in wine or water, without any particular caution: the leaves are now considered as one of our most valuable diuretics in dropsy, either in powder, infusion, or tincture, and as a sedative in pulmonary consumption; but it must be employed with care, as it has a great effect in reducing arterial action and retarding the pulse, and this action is frequently exerted suddenly, by the accumulated effects of small doses, so that if the practitioner be not constantly on his guard, he may be surprised by the occurrence of fatal symptoms and lose his patient, even after he has relinquished the use of the medicine.

Fam. IX. 26. SOLANEÆ. Jussieu.

Calyx 5-cut or 5-parted, persisting; *corolla* regular, 5-cut, deciduous; æstivation plaited; *stamens* 5, at the base of the corolla, alternate with the lobes; *ovary* 1, free, 2 or 4-celled, many-seeded; *style* 1; *stigma* blunt, rarely 2-furrowed; *pericarp* 2 to 4-celled; capsular 2-valved; dissepiments parallel and double, or berried; placentarium central, adnate to the dissepiment; *seeds* numerous, sessile; perisperm fleshy; corculum enclosed, curved or spiral, excentric; radicle near the hilum; cotyledons half-round.—*Herbs* or shrubs; *leaves* alternate; *flowers* mostly extrafoliaceous, pedicelled, bracteated, or rarely spiked.

1. *Pericarp capsular.*

Cor. rotate; *stamens* 5; filaments villous; *capsule* 2-valved ..... VERBASCUM. 83.

Cor. funnelshape; limb unequally 5-lobed; *capsule* ovate, operculated..... HYOSCYAMUS. 84.

Cor. funnelshape; limb regularly 5-lobed; *capsule* 2-valved; *stigma* nicked ..... NICOTIANA. 85.

Cor. funnelshape, 5-angular, 5-pointed; *capsule* 4-valved; *stigma* 2-lamellar.... STRAMONIUM. 86.

2. *Pericarp berried.*

Cal. and *cor.* campanulate; *stam.* 5, filiform; *berry* globose, on the calyx ..... ATROPA. 87.

Cal. 5-sepaled; *cor.* rotate, nectariferous at the base; *anthers* opening at top by 2 pores..... DULCAMARA. 88.

Cal. 5-sepaled; *cor.* rotate, naked at the base; *anthers* opening at top by 2 pores ... SOLANUM. 89.

Cal. 5-sepaled; *cor.* rotate; *anthers* opening longitudinally; *seeds* villous..... LYCOPERSICON. 90.

I. 83. VERBASCUM. Pliny. *Mullein.*

Calyx 5-parted; *corolla* rotate; limb 5-lobed, unequal; *stamens* 5, mostly unequal; filaments villous at the base; *capsule* 2-valved, 2-celled; dissepiments double, from the inflected edge of the valves; *seeds* many; spermodermis double; outer leathery; corculum straight; cotyledons oblong, rather leaflike; radicle central.

1. *Flowers glomerate.*

1. *Verbascum decurrens.* *Decurrent mullein.*

Leaves decurrent, tomentose on both sides; *stem* simple.

Verbascum mas latifolium luteum, *Raii Syn.* 287, 1.
Tapsus barbatus, *Ger. em.* 773, 1.
Verbascum album vulgare, sive Thapsus barbatus communis, *Park.* 60.
Verbascum Thapsus, *Lin. S. P.* 252.
Verbascum decurrens, *Stokes Bot. M. M.* 378.
Great mullein. High taper. Cow's lungwort. Hares' beard.

Chalky and sandy banks; biennial; July and August.

Root fusiform; *stem* 3-5 feet high, tomentose; *leaves* not cut, hairy, white, very much branched, entangled; *spike* terminal, many-shaped; *flowers* sessile, yellow or white.—Externally used it is emollient; given also to cows that are consumptive; a decoction, 2 oz. to the quart, given daily,

is useful in diarrhœa, or as a clyster in tenesmus; the down of the leaves is also used for tinder; the whole herb flung into ponds is said to intoxicate the fish so that they may be taken by the hand.

β. *thapso-nigrum.* *Leaves* ovate; lower leaves petioled; middle sessile; upper decurrent; *stem* branched; *flowers* in bunches, sessile.

A mule-plant of v. decurrens impregnated by v. nigrum, *Robson.*

γ. *nigro-lychnitis.* *Leaves* woolly; radical leaves petioled; stem leaves sessile; *flowering branches* numerous, axillary; *flowers* in bunches.

Near Yarmouth, probably a mule-plant, *Turner.*

2. *Verbascum thapsoides.* *Thapsus-like mullein.*

Leaves decurrent; *stem* branched.

Verbascum thapsoides, *Huds. Fl. Angl.* 90.
Verbascum Thapsi, *Lin. S. P.* 1669.
Verbascum Lychnitis β, *Smith Fl. Brit.* 250.
Bastard mullein.

Chalky and sandy meadows, Kent, *Hudson.*

3. *Verbascum lychnites.* *Candlewick mullein.*

Leaves wedgeshape, oblong, naked on the upper surface; *stem* angular, panicled; *beards* of the filaments yellowish.

Verbascum flore albo parvo, *Raii Syn.* 287, 3.
Verbascum lychnite Matthioli, *Ger. em.* 775, 3.
Verbascum mas, foliis longioribus, *Park.* 60.
Verbascum lychnites, *Lin. S. P.* 252.

Waysides in chalky soils; perennial; July and August.

Stem 3 feet high, woolly; *leaves* very woolly beneath, reticulately veined above; *stem leaves* sessile; *flowers* pedicelled, in bunches, milk-white.

4. *Verbascum pulverulentum* *Hoary mullein.*

Leaves ovate, oblong, slightly serrated, powdery on both sides, tomentose; *stem* round, panicled; *beard* of the filaments yellow; *anthers* bright red.

Verbascum pulverulentum flore luteo parvo, *Raii Syn.* 287, 2.
Verbascum Lychnitis β, *Huds. Fl. Angl.* 90.
Verbascum pulverulentum, *Salisb. Prod.* 104.
Yellow hoary mullein. Norfolk mullein.

Waysides and hedges in chalky soils; biennial; July.

Herb mealy, downy; *stem* 4 feet high; *leaves* all sessile, obsoletely serrated; *flowers* golden yellow; *beard* of the stamens whitish yellow.

5. *Verbascum mixtum.* *Mixed mullein.*

Leaves oblong, acute, slightly crenate, sessile, mealy tomentose; lower leaves petioled; *branches* panicled, villous; *beards* of the filaments violet.

Verbascum nigro-pulverulentum β, *Smith Fl. Br.* 251.
Verbascum mixtum, *De Candolle Fl. Fr.* 2674.

6. *Verbascum nigrum.* *Black mullein.*

Leaves oblong, heartshape, petioled, crenate rather downy; *beards* of the filaments purplish.

Verbascum nigrum flore parvo, apicibus purpureis, *Raii Syn.* 288, 4.
Verbascum nigrum, *Ger. em.* 775, 2; *Lin. S. P.* 253.
Verbascum nigrum vulgare, *Park.* 61.

Waysides; perennial; July and August.

Stem upright, angular, purplish, slightly branched; *leaves* dark green; *spike* very loose; *flowers* in bunches, pedicelled, golden yellow; *anthers* yellowish red.

7. *Verbascum virgatum.* *Rodlike mullein.*

Leaves oblong, lanceolate, toothed, sessile; *radical* leaves rather lyrate, downy; *stem* branchy; *flowers* aggregate, sessile.

Blattaria flore amplo, *Ger. em.* 778.
Verbascum Gallicum, *Willd. Sp. Pl.* 1005.
Verbascum virgatum, *Stokes in With. B. Arr.* 319.
Verbascum Chaexii, *Villars Delph.* 491.

Waysides and fields; biennial; August.

Stem 6 feet high, branched at bottom, round; *branches* simple, virgate; *radical leaves* wrinkled, pinnatifid at bottom, above shining, beneath venose; *flowers* yellow, very large, tube purplish.

b. *Flowers solitary.*

8. *Verbascum luridum.* *Dark mullein.*

Leaves amplexicaul, crenate, oblong, bald, serrate; radical leaves nearly lyrate, sinuate; *peduncles* 1-flowered, solitary; *stem* branched, angular; *beards* of the filaments purple.

Blattaria lutea, *Raii Syn.* 288, 1.
Blattaria Plinii, *Ger. em.* 776.
Blattaria flore luteo, *Park.* 64.
Verbascum Blattaria, *Lin. S. P.* 254.
Verbascum luridum, *Salisb. Prodr.*
Moth mullein.

Sandy places; annual; July.

Root fusiform; *stem* 4 feet high; *spikes* terminal, many-flowered; *flowers* golden yellow with purple lines.

II. 84. HYOSCYAMUS. Dioscorides. *Henbane.*

Calyx tubular, 5-cut; *corolla* funnelshape; limb obliquely spreading, unequally 5-lobed; *stamens* 5; *stigma* capitate; *capsule* ovate, compressed, dehiscent, circumscissile; *seeds* ascending; corculum homotropous.—Herbaceous; *bracteæ* mostly double; *flowers* solitary, axillary, mostly facing one way.

1. *Hyoscyamus niger.* *Black henbane.*

Leaves amplexicaul, sinuate; *flowers* nearly sessile.

Hyoscyamus vulgaris, *Raii Syn.* 274, 1.
Hyoscyamus niger, *Ger. em.* 353, 1; *Lin. S. P.* 257.
Hyoscyamus niger vel vulgaris, *Park.* 362.
Hyoscyamus lethalis, *Salisb. Prod.* 131.
Common henbane.

Ruins and waysides; annual; July.

Root fusiform; *herb* viscous, fœtid, woolly, clammy; *stem-leaves* alternate; *flowers* upright; *calyx* reticulately veined; *tube* of the corolla white, purple in the middle; *limb* pale yellow veined with purple; *anthers* and *style* deep purple.—Roots, leaves, and seeds, reputed poisonous; but the seeds may be eaten with impunity; the inspissated juice is added to opium to prevent costiveness; the smoke removes toothach.

2. *Hyoscyamus albus.* *White henbane.*

Stem-leaves petioled, heartshape, pointed, sinuate; *bracteæ* not cut; *flowers* nearly sessile; *corolla* bellied.

Hyoscyamus albus, *Ger. em.* 353, 2; *Lin. S. P.* 257.
Hyoscyamus luridus, *Salisb. Prod.* 132.

Rubbish by the sea-side; annual; July.

Leaves downy, paler than those of hyoscyamus niger.—Effects similar but milder than those of the black.

III. 85. NICOTIANA. Lonicerus. *Tobacco.*

Calyx 5-parted; lobes equal; *corolla* funnelshape; limb 5-plaited; *stamens* 5, equal, villous at bottom; *stigma* capitate, nicked; *capsule* ovate, conical; apex cut.

1. *Nicotiana rustica.* *Country tobacco.*

Leaves petioled, ovate, not in the least cut; lobes of the corolla blunt.

Hyoscyamus luteus, *Ger. em.* 356.
Nicotiana rustica, *Lin. S. P.* 258.
Yellow henbane. English tobacco.

Dunghills, naturalized from America; annual; July.

Leaves may be smoked for the same purposes as American tobacco.

IV. 86. STRAMONIUM. Lobel. *Thorn-apple.*

Calyx large, tubular, bellied, 5-angular; apex 5-cut, falling off; base orbicular, peltate, persistent; *corolla* very large, funnelshape; tube long; limb 5-angular, 5-plaited, 5-pointed; *stamens* 5; *stigma* 2-lamellar; *capsule* rough or smooth, half ovate, 4-celled; valves 2 or 4; dissepiments prominent.

Stramonium fœtidum. *Stinking thorn-apple.*

Capsules ovate, thorny, upright; *leaves* ovate, sinuate, bald, narrowed at bottom into a petiole.

Solanum pomo spinoso oblongo, flore calathoide, stramonium vulgo dictum, *Raii Syn.* 266, 1.
Stramonium spinosum, *Ger. em.* 348, 2; *Lamarck Fl. Gall.*
Stramonium majus album, *Park.* 360.
Datura Stramonium, *Lin. S. P.* 255.
Stramonium fœtidum, *Scop. Carn.* 252.
Stramonium vulgatum, *Gærtn. Fr. et Sem.* 2, 243.
Datura lurida, *Salisb. Prod.* 131.

Dunghills, waysides, naturalized from America; annual; July.

Herb lurid, narcotic; *stem* forked, spreading, 3-feet high; *leaves* from the fork; *flowers* axillary, white.—Leaves given internally bring on delirium, itching, eruptions and inflammation of the skin; these effects are counteracted by acetous or citric acid; the expressed juice of the leaves inspissated, used in doses of 2 to 16 grs. a day, is useful in convulsive and epileptic diseases: ointment made from them is anodyne: the seeds used internally produce the same effects as the leaves; the root and lower part of the stem smoked as tobacco is antispasmodic.

V. 87. ATROPA. Linnæus. *Dwale.*

Calyx bellshape, 5-cut; *corolla* bellshape, double the length of the calyx; *stamens* 5, equal; *filaments* threadshape, downy at bottom; *anthers* oval; *stigma* capitate; *berry* globose, sitting on the calyx.—*Stem* caulescent; *leaves* mostly in pairs; *flowers* extra-axillary, solitary, or rather crowded.

Atropa lethalis. *Deadly dwale.*

Stem herbaceous; *leaves* ovate, edge not cut.

Belladonna, *Raii Syn.* 265, 1.
Solanum lethale, *Ger. em.* 340; *Park.* 346.
Atropa Belladonna, *Lin. S. P.* 360.
Atropa lethalis, *Salisb. Prod.* 132.
Belladonna trichotoma, *Moench. Meth.* 179.

Chalky ruins; perennial; July.

Rhizoma creeping, fleshy; *stem* erect, 2-forked, downy; *leaves* lateral, in pairs, dark green; *flowers* lateral, solitary, peduncled, drooping, dark-violet; *calyx* viscous; *anthers* white; *berry* blackish, shining.—Leaves externally applied with advantage to tumours of the breasts, even if cancerous; applied to the eye it causes a dilatation of the pupil, and affects it for some time, so that it will not contract even in the strongest light. A poultice of the roots boiled in milk cures hard, ill-conditioned tumours and ulcers. Juice of the ripe berries is poisonous, and has frequently been fatal to children; it also stains paper of a durable purple.

VI. 88. DULCAMARA. Dodonæus. *Bitter-sweet.*

Calyx 5-parted; *corolla* rotate, 5-parted; lobes equal, reflected, with 2 green spots at the base of each; *stamens* 5; *anthers* oblong, soldered together; opening at the tip with 2 pores; *stigma* simple; *berry* ovate, shining, 2-celled, many-seeded; *seeds* smooth.—*Stem* shrubby; *leaves* lobed or sinuate; *flowers* corymbose, opposite to the leaves.

Dulcamara flexuosa. *Bending bitter-sweet.*

Stem flexuous; *leaves* bald, ovate, heartshape; upper leaves lobed, eared.

Solanum lignosum, seu Dulcamara, *Raii Syn.* 265, 1; *Park.* 350.
Amara dulcis, *Ger. em.* 350.
Solanum Dulcamara, *Lin. S. P.* 264.
Dulcamara flexuosa, *Moench. Meth.* 514.
Woody nightshade. Bitter-sweet.

Damp hedges; shrubby; June and July.

Root woody; *stem* branched; *leaves* petioled, alternate, not cut, bald; *corymbus* opposite or terminal, drooping; *flowers* violet, flesh-colour, or rarely white.—*Root* smells like potatoes: twigs in infusion highly esteemed as a restorative and alterative, far superior to China or sarsaparilla. Two drms. of the sliced dry twigs infused in a pint of hot water for half an hour, then boiled for 15 min. dose two cupfulls, morn and even. Useful in acute rheumatism, inflammatory diseases, fevers, suppression of the lochiæ, asthma, scurvy, and lues venerea.

β. *hirsuta.* *Leaves* rough with hairs.

Solanum lignosum, seu dulcamara marina, *Raii Syn.* 265, 2.

Sea-coasts, *Ray*, *Hudson.*

VII. 89. SOLANUM. Pliny. *Nightshade.*

Calyx 5-parted; *corolla* rotate, 5-lobes; lobes naked at bottom; *anthers* 5, oblong, opening at their tip by 2 pores; *stigma* blunt; *berry* smooth, fleshy, 2-celled, many-seeded; *seeds* smooth; corculum spiral.—*Stem* shrubby or herbaceous; *leaves* simple, sometimes pinnate with an odd one, in many doubly; *peduncles* solitary or many; one or many-flowered; extra-axillary, or scattered or terminal.

a. *Stem herbaceous, not armed; leaves sinuate or lobed; racemes forked, rather umbelled or panicled, drooping, extra-foliaceous; peduncles short; flowers small, white, or light violet; berry small, globular.* Maurella.

1. *Solanum nigrum.* *Black nightshade.*

Stem angular; *leaves* ovate, toothed, angular, bald; *berries* black.

Solanum vulgare, *Raii Syn.* 265, 4; *Park.* 346.
Solanum hortense, *Ger. em.* 339, 1.
Solanum nigrum, *Lin. S. P.* 266.
Solanum humile, *Salisb. Prod.* 134.
Garden nightshade. Morell. Petty morell.

Dunghills and gardens; annual; June to September.

Root much branched; *stem* spreading; *leaves* petioled; *flowers* smell like musk.—Leaves applied externally abate inflammation; internally, 1 or 2 grs. infused in boiling water, and taken at bedtime, occasions a copious perspiration, are diuretic, and generally purge the next day.

2. *Solanum villosum.* *Villous nightshade.*

Stem round, villous at top; *leaves* ovate, angulate, rather villous; *berries* yellow.

Solanum nigrum β, *Huds. Fl. Angl.* 93.
Solanum villosum, *De Cand. Fl. Fr.*

Dunghills and cultivated grounds; annual; July.

b. *Leaves pinnately cut with an odd lobe; lobes not cut; racemes corymbose, terminal.*

3. *Solanum tuberosum.* *Tuberous nightshade.*

Root bearing tubers; *stem* herbaceous, not armed; *segments* of the leaves unequal, alternate; *pedicells* jointed; *corolla* 5-angular.

Solanum tuberosum esculentum, *Raii Syn.* 265, 3.
Battata Virginiana, sive Virginianorum, et Pappus, *Ger. em.* 927.
Pappas, seu Battatas Virginianorum, *Park. Par.* 517, 3.
Solanum tuberosum, *Lin. S. P.* 285.
Lycopersicon tuberosum, *Miller Dict.*
Battatas. Virginia potatoes. Potatoes.

Cultivated, naturalized from Peru; peren.; June, July.

Root tuberous, abounding in starch, nutritive, yielding far more food on an acre than any other plant, hence the cultivation of it spreads rapidly over the globe; *tubers* nearly cylindrical; *skin* white; *leaves* dark green; *corolla* white.

β. *rubrum.* *Tubers* large, nearly cylindrical; *skin* red; *leaves* dark green; *corolla* reddish, variegated.

γ. *album.* *Tubers* oblong; *skin* red; *leaves* dark green; *corolla* whitish.

δ. *variegatum.* *Tubers* roundish; *skin* yellowish; *leaves* crisp; *corolla* variegated.

ε. *violaceum.* *Tubers* first round, growing rather cylindrical; *skin* mottled with yellow and red; *corolla* violet.

VIII. 90. LYCOPERSICON. Anguillara. *Love-apple.*

Calyx 5 to 20-parted; *corolla* 5 to 20-cut; *anthers* polyadelphious, conical, tip lengthened by a membrane opening lengthways; *style* broad, nearly simple; *stigmata* many; *ovary* many-celled; *berry* bunched, broad, fleshy; *seeds* villous.—*Leaves* pinnately-cut with an odd lobe; *pedicell* jointed under the flower; *corolla* yellow.

Lycopersicon esculentum. *Eatable love-apple.*

Stem hairy, hairs diverging; *leaves* irregularly pinnately-cut; segments incised, beneath glaucous.

Poma amoris, *Ger. em.* 346.
Pomum amoris majus, *Park.* 353.
Solanum Lycopersicon, *Lin. S. P.* 185.
Lycopersicon Pomum amoris, *Moench. Moeth.* 515.
Gold apples. Tomatoes.

Dunghills, and cultivated as a potherb; annual; June.

Panicles internodial; *fruit* shining. — Fruit boiled in soups; pulp of the fruit boiled with salt and spices used as a sauce.

Fam. X. 27. GENTIANÆ.

Calyx 1-leafed, 5 rarely 8-cut, persistent; *corolla* monopetalous, hypogynous, regular, withering or falling off; limbs lobed; lobes equal to the lobes of the calyx; æstivation imbricate; *stamens* as many as the lobes, alternating with them; *ovary* 1, free, 1 or 2-celled, many-seeded; *style* 1, rarely 2; *stigma* simple or 2-lobed; *capsule* many-seeded, 1 or 2-celled, 2-valved; valves with inflected edges, which, in the 2-celled, form the dissepiments; *seeds* small, on the edge of the valves; corculum straight, in the centre of the fleshy perisperm; radicle near the umbilicus.—*Stipules* 0; flowers terminal or axillary.

Corolla rotate; lobes fringed; base bearded; *seeds* margined, fringed ..... LIMNANTHE. 98.
Corolla rotate; lobes bald; base 2-glandular; *seeds* margined, not cut ..... SWERTIA. 97.
Cor. rotate, 8-cut; lobes bald; base naked; *seeds* ovate ..... CHLORA. 96.
Cor. funnelshape; tube long; *stigma* 2-cut; *anthers* becoming spirally twisted .. ERYTHÆA. 94.
Cor. funnelshape; lobes hairy; *stigma* capitate; *leaves* ternate ..... MENYANTHES. 99.
Cor. funnelshape; mouth naked; lobes not fringed, eared; *anthers* distinct ..... ERICALA. 92.
Cor. hypocrateriform; mouth bearded: lobes 4 or 5, not fringed; *anthers* distinct ERYTHALIA. 93.
Cor. hypocrateriform; tube bellied; lobes 4; *anthers* straight; *stigma* capitate FRANQUEVILLIA. 95.
Cor. bellshape; mouth naked; lobes not fringed; *anthers* connate ..... PNEUMONANTHE. 91.

A. GENTIANÆ VERÆ. *Leaves* opposite, mostly sessile; edge not cut; *capsule* 1-celled; *herb* very bitter.

I. 91. PNEUMONANTHE. Val. Cordus. *Lungflower.*

Calyx rather 5-sided, 5-toothed; *corolla* bellshape, 5-cut; mouth naked; teeth 5, alternating with the lobes; edge not cut; *stamens* 5; *anthers* grown together into a tube; *stigmata* 2, sessile; *capsule* oblong, 1-celled, 2-valved, opening at the tip; *seed* round, not margined.—*Root* perennial; *flowers* blue, plaited.

1. *Pneumonanthe vulgaris.* *Common lungflower.*

Leaves linear, blunt; *flowers* axillary and terminal, peduncled.

Gentiana palustris angustifolia, *Raii Syn.* 274, 1.
Pneumonanthe, *Ger. em.* 438.
Gentianella autumnalis, pneumonanthe dicta, *Park.* 406.
Gentiana Pneumonanthe, *Lin. S. P.* 330.
Gentiana linifolia, *Salisb. Prod.* 137.
Gentiana linearifolia, *Lamarck Fl. Fr.* 2, 298.
Ciminalis Pneumonanthe, *Brockh. in Rœmer. Arch.* 1, 26.
Pneumonanthe vulgaris, *Schmidt in Rœm. Arch.* 1, 17.
Calathian violet. Autumn bellflower. Harvest bells.

Turfy heaths; perennial; August and September.

Root flagelliform; *stem* upright, simple, 4-angled; *flowers* deep blue, plaits of the corolla green.

2. *Pneumonanthe grandiflora.* *Large lungflower.*

Stem 1-flowered, scarcely as long as the flower; *plaits* of the corolla spotted on the inside; spots ovate; *leaves* ovate, lanceolate, 3-ribbed.

Gentianella verna major, *Ger. em.* 436, 1.
Gentianella Alpina verna major, *Park.* 403.
Gentiana acaulis, *Lin. S. P.* 330.
Gentiana grandiflora, *Lamarck. Fl. Fr.* 2, 333.
Pneumonanthe acaulis, *Schmidt in Rœm. Arch.* 1, 17.
Ciminalis acaulis, *Brockh. in Rœm. Arch.* 1, 26.
Ciminalis longiflora, *Moench. Meth.* 514.

Mountains of South Wales; perennial; May.

Flowers very large, blue.

II. 92. ERICALA. Renealm. *Bastard-felwort.*

Calyx tubular, 3 to 5-angular, toothed; *corolla* funnel-shape or hypocrateriform; limb 5-lobed, lobes with a tooth on each side; edge not cut or crenate; mouth naked; *stamens* 5; *anthers* free; *stigmata* 2-lobed, fringed, sessile; *capsule* fusiform, 1-celled, 2-valved, opening at the top; *seeds* ovate.—*Root* perennial; *stems* many, mostly simple; *flowers* terminal and axillary, blue.

1. *Ericala verna.* *Spring bastard-felwort.*

Stems many, simple, 1-flowered; *leaves* ovate, acute; radical leaves crowded, large; *corolla* hypocrateriform, longer than the stem, 5-cut.

Gentiana alpina verna, *Ger. em.* 436, 2.
Gentiana verna, *Lin. S. P.* 331.
Gentiana Bavarica, *Jacq. Obs.* 3, 19.
Ericala verna, *Brockh. in Rœm. Arch.* 1, 26.
Hippion vernale, *Schmidt in Rœm. Arch.* 1, 17.
Gentianella serrata α, *Lamarck Fl. Fr.* 2, 294.
Spring alpine felwort.

Barren mountains; perennial; April.

Root creeping; *stem* short, branched at bottom, 4-angular above; *flowers* terminal; *corolla* deep blue, tube whitish green; lobes crenate.

2. *Ericala Bavarica.* *Bavarian bastard-felwort.*

Stems many, simple, 1-flowered; *leaves* ovate, blunt; radical leaves crowded, imbricate, smaller than the others.

Gentiana Bavarica, *Lin. S. P.* 331.
Hippion Bavaricum, *Schmidt in Rœm. Arch.* 1, 17.
Ericala Bavarica, *Brockh. in Rœm. Arch.* 1, 26.

Barren mountains; perennial; April.

3. *Ericala nivalis.* *Snow bastard-felwort.*

Stem branched; branches alternate, 1-flowered; *stem leaves* lanceolate; *corolla* funnelshape, 5-cut.

Gentianella fugax minor, *Ger. em.* 437, 3.
Gentiana nivalis, *Lin. S. P.* 332.
Hippion nivale, *Schmidt in Rœm. Arch.* 1, 17.
Ericala nivalis, *Brockh. in Rœm. Arch.* 1, 26.
Small alpine gentian. Dwarf felwort.

Scotch alps; annual; August.

Root fibrous; *stem* and *branches* upright; *radical leaves* pointed; *flowers* deep blue, tube greenish.

III. 93. ERYTHALIA. Renealm. *Erythalia.*

Calyx bellshape, 4 or 5-cut; *corolla* hypocrateriform, 4 or 5-lobed, edge not cut, with a many-cut scale or paraphyllum at the base of each lobe; *stamens* 4 or 5, distinct; *styles* 2; *stigmata* clubshape; *capsule* 1-celled; *seeds* ovate, not margined.—*Root* annual; *leaves* and *lobes* of the calyx minutely cartilaginously serrated at the edge; *flowers* fascicled, rather umbelled.

1. *Erythalia pulchella.* *Pretty erythalia.*

Calyx 4 or 5-lobed; lobes equal; *leaves* ovate, lanceolate.

Gentianella fugax autumnalis elatior, centaurii minor foliis, *Raii Syn.* 275, 1.
Gentiana Amarella, *Lin. S. P.* 334.
Gentiana Germanica, *Willd. Sp. P.*
Gentiana campestris, *Allioni Pedem.*
Gentiana Amarella α, *Lamark Fl. Fr.* 292.
Gentiana pulchella, *Salisb. Prod.* 137.
Erythalia Amarella, *Brockh. in Rœm. Arch.* 1, 26.
Hippion Amarellis, *Schmidt in Rœm. Arch.* 1, 17.

Chalky pastures; annual; August.

Root fusiform, twisted; *stem* upright, branchy above; *leaves* ovate, 3-ribbed; *peduncles* 1 or 2-flowered; *tube* of the corolla white, limb purple.

β. *quadrifida.* *Corolla* 4-cut.
Gentiana campestris, *Walcot. Brit. Flor.*

γ. *præcox.* Flowering in April or May.
Gentiana fugax verna, seu præcox, *Raii Syn.* 275, 3.

δ. *multiplicata.* Flowers double; lobes inflected.

2. *Erythalia campestris.* *Field erythalia.*
Calyx 4-lobed; 2 outer lobes larger, ovate, spearshape, overlapping the other 2; *edge* of the lobes of the calyx and of the leaves cartilaginous and minutely serrated.
Gentiana pratensis, flore lanuginoso, *Raii Syn.* 275, 1.
Gentiana campestris, *Lin. S. P.* 334.
Gentiana Amarella β, *Lamark Fl. Fr.*
Gentiana Amarella, *Allioni Pedem.* 353.
Erythalia campestris, *Brockh. in Rœm. Arch.* 1, 26.
Hippion campestre, *Schmidt in Rœm. Arch.* 1, 17.
Gentianella tetandra, *Moench Meth.* 482.
Chalky pastures and hills by the sea; ann.; September.
Stem 9 in. high, rather branchy; *calyx* appearing as if enclosed in 2 bracteæ.

IV. 94. ERYTHRÆA. Renealm. *Centory.*
Calyx 5-sided, 5-cut; *corolla* funnelshape; tube cylindrical; mouth denticulated; limb 5-cut; *stamens* 5, equal, exserted, declined; *anthers* distinct, after the anthesis spirally twisted; *style* 1; *stigma* capitate, 2-parted; *capsule* linear, 1-celled.—*Flowers* rose-coloured, in bundles, terminal or axillary.

1. *Erythræa vulgaris.* *Common centory.*
Stem long, forked; *leaves* ovate, oblong; radical leaves crowded; *flowers* sessile, panicled, girt at the base with 1 or 2 scales; *calyx* shorter than the tube.
Centaurium minus, *Raii Syn.* 287, 1.
Centaurium parvum, *Ger. em.* 547, 1.
Centaurium minus vulgare, *Park.* 272.
Gentiana Centaurium, *Lin. S. P.* 332.
Chironia Centaurium, *Curtis Fl. Lond.*
Centaurium vulgare, *Rafinesque.*
Chironia pulchella, *Salisb. Prodr.* 334.
Erythræa Centaurium, *Pers. Syn.* 1, 283.
Little centory. Small centory. Small purple centory.
Dry pastures; annual; July and August.

Root branched; *stem* 12 in. high, 4-angular, branched at bottom; *leaves* 3-ribbed, smooth.

β. *quadrifida.* *Corolla* 4-cut.

γ. *alba.* *Corolla* white.

2. *Erythræa littoralis.* *Shore centory.*

Stem simple, stiff; *leaves* linear, obovate; *lobes* of the calyx subulate; *flowers* sessile, corymbose, capitate.

Chironia littoralis, *Eng. Bot.* 33, 2305.
Erythræa conferta, *Persoon Syn.* 1, 283?

Northern sea-shores; annual; June.
Stem 3 in. high; *style* scarcely declined.

3. *Erythræa pulchella.* *Pretty centory.*

Stem short, much branched; *leaves* ovate; *lobes* of the calyx awlshape, little shorter than the tube of the corolla; *flowers* erect, pedicelled.

Gentiana Centaurium β, *Lin. S. P.* 333.
Chironia pulchella, *Swart. Act. Hol.* 1783, 85.
Erythræa ramosissima, *Pers. Syn.* 283.

Sandy sea-shores; annual; August and September.
Stem 2 in. high, forked; *leaves* 3 or 5-ribbed.

V. 95. FRANQUEVILLIA. R. A. Salisbury. MSS.

Gentianella.

Calyx cupshape, rather angular, 4-cut; *corolla* hypocrateriform; tube ovate; limb 4-cut, regular; *stamens* 4, short, upright; *anthers* straight, distinct, slightly exserted; *style* 1; *stigma* capitate; *capsule* 1-celled, 2-valved, open at top; *seeds* angular, dotted.—*Flowers* upright, terminal, loosely panicled or solitary, yellow, persisting; *peduncles* long.

Franquevillia minima. *Least gentianella.*

Stem rather forked; *radical leaves* roundish; *stem leaves* awlshape, connected at the base.

Centaurium palustre luteum minimum nostras, *Raii Syn.* 286, 2.
Gentiana filiformis, *Lin. S. P.* 335.
Exacum filiforme, *Engl. Bot.* 235.
Hippion filiforme, *Schmidt in Rœmer Arch.*

Bogs; annual; July.
Roots fibrous; *stem* forked or simple, roundish, 2 in. high; *peduncles* 4-sided, 1-flowered.

VI. 96. CHLORA. Renealm. *Yellow-wort,*

Calyx 8 or 10-sepaled; sepales lanceolate; *corolla* hypocrateriform; tube short; limb 6 or 10-parted; *stamens* 6 to 10; *filaments* short, inserted in the mouth of the corolla; *anthers* upright, exserted; *styles* 1, short, 2-cut; *stigmata* 2, 2-cut; *capsule* oblong, 1-celled, many-seeded; *seeds* ovate.—*Stem* forked at top; *leaves* connate at the base; *flowers* solitary, from the forks of the stem.

Chlora perfoliata. *Thoroughleafed yellow-wort.*

Herb glaucous; *radical leaves* ovate, stellate; *stem leaves* 3-angular, acute, connate.

Centaurium luteum perfoliatum, *Raii Syn.* 287, 4.
Centaurium luteum Lobelii, *Ger. em.* 547, 2.
Centaurium minus luteum et perfoliatum non ramosum, *Park.* 271.
Gentiana perfoliata, *Lin. S. P.* 335.
Chlora perfoliata, *Lin. Mant.*
Blackstonia perfoliata, *Huds. Fl. Angl. ed.* 1, 146.
Chironia perfoliata, *Salisb. Prod.* 137.
Yellow centory.

Chalk hills; annual; July and August.

Root tortuous; *stem* 1 foot high.

VII. 97. SWERTIA. Linnæus. *Fellwort.*

Calyx 4 or 5 sepaled; *corolla* rotate; tube very short, not spurred; limb 5-parted; lobes lanceolate; glands 2, fringed, at the base of each lobe; *stamens* 4 or 5, shorter than the corolla; *anthers* versatile; *style* very short, 2-parted; *stigmata* 2; *capsule* ovate, 1-celled, 2-valved, many-seeded; *seeds* margined, wing not cut.—*Flowers* blue, axillary and terminal; *peduncles* often 1-flowered.

Swertia perennis. *Perennial fellwort.*

Stem simple; *radical leaves* lengthened into a petiole; *peduncles* 4-sided, opposite; *corolla* 5-cut.

Gentiana Pennei minor, *Ger. em.* 433, 5.
Swertia perennis, *Lin. S. P.* 328.
Spotted gentian. Marsh gentian.

Alpine bogs; perennial; August.

Root white; *stem* a foot high; *flowers* upright, purplish, spotted with black.

B. MENYANTHEÆ. *Leaves* alternate, mostly toothed, or ternate; *æstivation* inflected.

VIII. 98. LIMNANTHES. Stokes. *Water-rose.*

Calyx 5-parted; *corolla* rotate, limb spreading, 5-parted; edge of the lobes ciliated, base bearded; *stamens* 5; *style* short; *stigma* 2-lobed, lobes crenate; *glands* 5, hypogynous, alternating with the stamens; *capsule* compressed, 1-celled, valveless, suture seedbearing, in 2 rows; *seeds* compressed, edge winged; wings fringed.—*Herb* floating; *leaves* alternate, peltate, rough underneath; *petiole* dilated at the base, rather sheathing; *flowers* yellow, axillary, in bundles; *peduncles* 1-flowered.

Limnanthes peltata. *Shield-leaf water-rose.*
Leaves heartshape orbicular; edge not cut.

Nymphæa lutea minor, flore fimbriato, *Raii Syn.* 368, 2.
Nymphæa lutea minima, *Ger. em.* 820, 5.
Nymphæa lutea minor, *Park.* 1252.
Menyanthes nymphoides, *Lin. S. P.* 207.
Limnanthemum peltatum, *Gmel. Act. Petr.* 1769, 527.
Waldschmidia nymphoides, *Wigg. Fl. Holsat.* 20.
Villarsia nymphoides, *Ventenat.*
Menyanthes natans, *Lamarck Fl. Fr.* 203.
Menyanthes nymphæoides, *Engl. Bot.* 217.
Limnanthes nymphoides, *Stokes Bot. Med. Mat.* 300.
Fringed buckbean. Less yellow water-lily. Dwarf water-lily.

Ditches and slow streams; perennial; July and August.
Stem very long; *leaves* dark green, sometimes spotted.

IX. 99. MENYANTHES. Dioscorides. *Buckbean.*

Calyx 5-parted; *corolla* funnel-shape; inside densely villous; limb spreading, bent back, 5-lobed; edge not cut; *stamens* 5: *style* 1, exserted; *stigma* capitate, 2 cut; *capsule* 1-celled, 2-valved; *seeds* ovate, compressed, shining.—*Leaves* ternate, petioled; *base* of the petiole dilated, rather sheathing; *scape* many-flowered; *flowers* spiked; *bractea* 1 at the base of each peduncle.

Menyanthes palustris. *Marsh bucklean.*

Menyanthes palustre, triphyllum latifolium et angustifolium, *Raii Syn.* 285, 1.
Trifolium paludosum, *Ger. em.* 1194; *Park.* 1212.
Menyanthes trifoliata, *Lin. S. P.* 208.
Marsh clover. Marsh trefoil.

Watery places and spongy bogs; perennial; June, July.

Root black; *stem* ascending, branched at bottom; *leaflets* toothed, repand; *flowers* peduncled, flesh-colour.—Leaves extremely bitter, used instead of hops, and to destroy worms, as also in rheumatism and dropsy; they are also smoked.

Fam. XI. 28. POLEMONIACEÆ. Ventenat. *Polemonii*, Jussieu. *Polemonideæ*, Persoon. *Personatæ*, Adanson.

Calyx 1-leafed, divided, persisting; *corolla* 1-petaled, hypogynous, regularly 5-lobed; *stamens* 5, inserted in the middle of the tube of the corolla, alternating with the lobes; *ovary* 1, free, 3-celled, many-seeded, girt at the base with an annular gland; *style* simple; *stigmata* 4; *capsule* 3-celled, 3-valved; dehiscence loculicidal; spermophore axile, 3-sided, angles opposed to the middle of the valves; *seeds* many, peritropal; spermodermis membranaceous; perisperm fleshy; corculum straight, transverse; radicle below; cotyledons elliptical, leaflike.—*Stem* herbaceous; *leaves* opposite or alternate; *flowers* terminal or axillary.

I. 100. POLEMONIUM. Dioscorides. *Jacob's ladder.*

Calyx pitchershape, 5-cut; *corolla* bellshape, rotate; tube short; limb 5-lobed; *stamens* 5; *filaments* dilated, villous at bottom; *anthers* oval, incumbent; *capsule* 3-celled; cells 2-seeded: *seeds* angular.—*Herb* erect; *leaves* alternate, pinnate with an odd leaflet; *flowers* subcorymbose, terminal.

Polemonium vulgare. *Common Jacob's ladder.*

Flowers upright; *calyx* longer than the tube of the corolla; *root* fibrous.

Polemonium vulgare cæruleum et album, *Raii Syn.* 288, 1.
Valeriana Græca, *Ger. em.* 1076; *Park.* 122.
Polemonium cæruleum, *Lin. S. P.* 280.
Polemonium elatum, *Salisb. Prod.* 125.
Greek valerian. Ladder to heaven. Setwall.

Limestone rocks; perennial; June.

Stem pubescent, angular; *leaflets* 14 to 17 pair, ovate, unequal at the base; *corolla* blue or white.

Fam. XII. 29. VINCÆ. *Apocynarum genus.* Jussieu.

Calyx 5-cut, persisting; *corolla* 1-petaled, hypogynous, regular, 5-lobed; æstivation imbricate, deciduous; *stamens* 5, on the corolla, alternating with the lobes; *filaments* distinct; *anthers* 2-celled, opening longitudinally; *pollen* granular, applied immediately to the stigma; *ovaries* 2; *style* 1; *stigma* 1, capitate; *follicles* 2, long, 1-celled or half 2-celled; opening longitudinally on the inner edge; *seeds* naked, often margined, on the edges of the follicles; spermodermis simple; perisperm fleshy; corculum straight; radicle above; plumule inconspicuous; cotyledons leaflike. — *Shrubs* or under-shrubs often twining, lactescent; *leaves* opposite, edge not in the least cut, often fringed with glands; *flowers* axillary or terminal.

I. 101. VINCA. Pliny. *Pervinkle.*

Calyx 5-parted; *corolla* salvershape; tube long; mouth slightly prominent, 5-sided; limb flat, 5-lobed; *lobes* blunt; *anthers* approaching; *stigma* annulate at the base; *follicles* upright, round, half 2-celled; *seeds* ovate.—*Stem* shrubby, diffuse; *flowers* solitary, axillary.

1. *Vinca minor.* *Small pervinkle.*

Stem procumbent; *leaves* oblong, lanceolate, edge bald; *peduncles* 1-flowered, solitary, axillary, longer than the leaves; *teeth* of the calyx lanceolate.

Vinca pervinca minor, *Raii Syn.* 268, 1; *Ger. em.* 894, 1.
Vinca pervinca vulgaris, *Park.* 380.
Vinca minor, *Lin. S. P.* 304.
Vinca ellipticifolia, *Stokes Bot. Mat. Med.* 495.
Vinca humilis, *Salisb. Prod.* 146.

Woods and coppices; perennial; May.

Rhizoma creeping; *stem* upright; *leaves* perennial; *flowers* alternate, violet; mouth white.

2. *Vinca major.* *Great pervinkle.*

Stem upright; *leaves* ovate, edge fringed; *peduncles* one-flowered, solitary, axillary; *teeth* of the calyx bristlelike, long.

Vinca q. Clematis daphnoides major, *Raii Syn.* 268, 2.
Clematis daphnoides, sive Pervinca major, *Ger. em.* 894.
Clematis daphnoides latifolia, seu Vinca pervinca major, *Park.* 381.
Vinca major, *Lin. S. P.* 304.
Pervinca major, *Scop. Carn.* 274.
Vinca grandiflora, *Salisb. Prod.* 146.
Vinca ovalifolia, *Stokes B. M. M.* 497.

Woods and coppices; perennial; May.
Stem upright; *leaves* rough; *flowers* blue; *follicles* shining.

Fam. XIII. 30. CONVOLVULACEÆ. De Candolle.
Convolvuli, Jussieu.

Calyx 5-lobed, persisting; *corolla* 1-petal, hypogynous, deciduous, limb 5-lobed; lobes regular; *stamens* 5, inserted at the base of the corolla and alternate with the lobes; *ovary* simple, 2 or 4-celled, rarely 1-celled or 2 or 4-parted, few-seeded, girt at the base with an annular gland; *ovules* definite; *style* 1, simple or divided; *stigma* obtuse or acute; *capsule* 2 or 4-celled, mostly valvular, rarely valveless or opening transversely; edge of the valves opposite to the dissepiments: *seeds* bony, affixed at the base of the inner angles of the dissepiments; *perisperm* mucilaginous; *corculum* curved; *cotyledons* corrugated; *radicle* below.—*Stem* herbaceous, rarely shrubby, mostly twining, milky, bald or simply pubescent; *leaves* alternate, mostly undivided, rarely 0; *stipules* 0; *inflorescence* axillary or terminal: *peduncles* 1 or many-flowered; *bracteæ* usually 2 to each flower.

Corolla bellshape; *calyx* 5-parted;
bracteæ 2, leaflike, embracing the calyx. CALYSTEGIA. 102.
Corolla bellshape; *calyx* 5-parted;
bracteæ 0, or very small, distant .... CONVOLVULUS. 103.
Corolla bellshape, tube naked;
plant leafless, parasitic. ..... CASSYTHA. 105.
Corolla funnelshape, tube 4 or 5-scaled;
plant leafless, parasitic ..... CUSCUTA. 104.

A. CONVOLVULI. *Ovary* 1; *capsule* mostly valvate; *cotyledons* wrinkled; *plant* leafy.

I. 102. CALYSTEGIA. R. Brown. *Bindweed.*

Calyx 5-parted, inclosed in a 2-leaved bractea; *corolla* bellshape, 5-plaited, 5-angled; *stamens* 5, nearly equal, shorter than the limb; *ovary* half 2-celled, 4-seeded; *style* undivided; *stigmata* 2, blunt, round or globular; *capsule* 1-celled.—*Herb* milky, bald, twining or prostrate; *peduncles* solitary, 1-flowered.

1. *Calystegia sepium.* *Hedge bindweed.*

Stem twining; *leaves* arrowshape, acute, barb blunt; *bracteæ* half the length of the corolla; *peduncle* 4-sided, longer than the petiole.

Convolvulus major, *Raii Syn.* 275, 1.
Smilax lenis sive lævis major, *Ger. em.* 861, 1.
Convolvulus major albus, *Park.* 163.
Convolvulus sepium, *Lin. S. P.* 212.
Convolvulus repens, *Lin. S. P.* 218.
Convolvulus lætus, *Salisb. Prod.* 123.
Calystegia sepium, *R. Brown, Pr. Fl. N. H.* 483.
Great bindweed. Withe-wind. Hedge bells.

Damp hedges and holts; perennial; July and August.

Root creeping; *stem* angular; *leaves* hanging down; *flowers* white, flesh or deep rose-coloured.

2. *Calystegia asarifolia.* *Asarabacca-leaved bindweed.*

Stem prostrate; *leaves* kidney-shape, rather fleshy; *peduncles* 4-angled, angles winged; *bracteæ* blunt, the length of the calyx.

Convolvulus maritimus Soldanella dictus, *Raii Syn.* 276, 5.
Soldanella marina, *Ger. em.* 838, 1.
Soldanella vulgaris, *Park.* 161.
Convolvulus Soldanella, *Lin. S. P.* 236.
Convolvulus asarifolia, *Salisb. Prod.* 123.
Sea bindweed. Sea withewind. Sea-bells. Sea-cole. Sea foalfoot. Scottish scurvygrass.

Sandy sea-shores; perennial; July.

Root creeping; *stem* short, few-flowered; *leaves* smooth; *peduncles* upright; *flowers* flesh-colour, plaits yellow; *stigma* 2-lobed; lobes 2-cut; *seeds* angular.

II. 103. CONVOLVULUS. Pliny. *Convolvulus.*

Calyx 5-parted; *bracteæ* 0, or 2, slender, distant from the calyx; *corolla* bellshape, 5-plaited, 5-angled; *stamens* 5, nearly equal; *ovary* 2-celled; cells 2-seeded; *style* undivided; *stigmata* 2, threadshape; *capsule* valvate. — *Stem* twining, milky; *peduncles* solitary, 1 or few-flowered.

1. *Convolvulus arvensis.* *Cornfield convolvulus.*

Stem twining; *leaves* arrowshape; barbs and tip sharp; *peduncles* 4-sided, 1-flowered; *bracteæ* linear.

Convolvulus minor vulgaris, *Raii Syn.* 275, 2; *Park.* 171.
Smilax lævis minor, *Ger. em.* 861, 2.
Convolvulus arvensis, *Lin. S. P.* 218.
Convolvulus sagittifolia, *Salisb. Prod.* 123.
Small bindweed. Withe-wind. Hedge-bells.

Fields and hedges; perennial; June and July.

Root creeping; *stem* angular; *leaves* rather bald; *peduncles* bracteated in the middle; *flowers* flesh-colour, sweet-scented.

2. *Convolvulus auriculatus.* *Eared convolvulus.*

Leaves linear, hastate, pointed; barbs not nicked; *peduncles* 4-sided, 1-flowered; *bracteæ* lanceolate.

Convolvulus arvensis minimus, *Raii Syn.* 276.
Convolvulus arvensis β, *Lin. S. P.* 232.
Convolvulus auriculatus, *Lamarck Encyc. Meth.* 540.

Hedges; perennial; June.

Leaves and *flowers* much smaller than those of C. arvensis.

B. CUSCUTÆ. *Ovary* 1; *capsule* opening tranversely, two-celled; *corculum* spiral; *cotyledons* 0; *plant* leafless, parasitic.

III. 104. CUSCUTA. Matthiolus. *Dodder.*

Calyx 4 or 5-cut; *corolla* funnelshape; tube short; limb 4 or 5-cut; *stamens* 5; *filaments* inserted in the mouth, with a scale near the bottom; *stigmata* 2, pointed; *capsule* 2-celled, 2-seeded, cut round.—*Herb* leafless, twining, parasitic; *flowers* sessile, aggregate, capitate; *bractea* 1.

Cuscuta minor. *Small dodder.*

Flowers sessile; *nectariferous scale* crenate; *stigmata* pointed.

Cuscuta major, *Raii Syn.* 281.
Cuscuta sive cassuthe, *Ger. em.* 577.
Cuscuta, *Park.* 10.
Cuscuta europæa β, *Lin. S. P.* 180.
Cuscuta europæa, *Huds. Fl. Angl.* 104.
Cuscuta epithymum, *Lin. Sys. Veg. a Murray*, 167.
Cuscuta campanulata, *Stokes Bot. Mat. Med.* 239.

Parasitic on heath; perennial; August.

Stem twisted: *flowers* crowded; *calyx* reddish; *corolla* white.—Herb purgative; but believed to partake, in some measure, of the virtues of the plants on which it grows.

IV. 105. CASSYTHA. Gesner. *Hellweed.*

Calyx 5-cut; *corolla* bellshape, 5-cut; *stamens* 5; *filaments* inserted in the throat of the corolla, naked; *stigmata* 2, pointed; *capsule* cut round, 2-celled, 2-seeded.—*Stem* annual, leafless, twining, parasitic; *flowers* peduncled, aggregate, capitate; *bractea* 1.

Cassytha major. *Great hellweed.*
Flowers nearly sessile; *stigmata* pointed.
Cuscuta major, *C. Bauh. Pin.* 219, 3.
Cuscuta europæa, *Lin. S. P.* 180.
Great dodder. Strangletare. Devil's guts.
Parasitic on thistles and nettles; annual; August.
Stem bald; *flowers* transparent, reddish.

Fam. XIV. 31. BORAGINEÆ, Jussieu. *Buglossinæ*, Link.

Calyx 5-cut; *corolla* hypogynous, 1-petaled, mostly regular, 5-cut, rarely 4-cut; mouth naked or with 5 scales; æstivation inbricate; *stamens* on the corolla, equal, alternating with the lobes, rarely 0; *ovary* 1, free, 4-parted, 4-seeded, or simple 2 or 4-celled; *ovules* definite, pendulous; *style* 1, on the gynobasis; *stigma* 2-cut; *cariopsides?* 4, distinct or connate at the base; *perisperm* 0; corculum straight; radicle above; cotyledons leaflike. *Herbaceous* or shrubby; *leaves* alternate, mostly rough; hairs conical, usually not partitioned, stiff, often rough, filled with a grumous mass, dilated at bottom, placed on a cellular tubercle, often girt with cells at bottom, and very rarely with other partitioned hairs placed among the others; *stipules* 0; *flowers* mostly in a 1-sided spike, rarely panicled or corymbose, something axillary, solitary.

A. *Cariopsides* 4, *topshape, distinct,* 1-*celled, imperforate at the bottom; gynobasis flat; mouth of the corolla pervious.*

Corolla funnelshape; mouth naked; tube 2 or 3 times as long as the calyx ..... MERTENSIA. 114.
Cor. funnelshape; mouth naked; tube twice as long as the calyx ..... ÆGONYCHON. 115.
Cor. funnelshape, mouth with 5 gibbous warts; as long as the calyx ..... LITHOSPERMUM. 116.
Cor. funnelshape; mouth hairy; *calyx* tubed, or 5-angular ..... PULMONARIA. 113.
Cor. tubular; limb swelled, unequal; *calyx* 5-parted ..... ECHIUM. 118.

B. *Cariopsides* 4, *topshape, distinct,* 1-*celled, imperforate at the bottom; gynobasis flat; mouth of the corolla closed.*

Cor. funnelshape; mouth closed with scales; *cariopsides* smooth ..... MYOSOTIS. 106.

Corolla rotate; mouth closed with radii; *cariopsides* wrinkled..... BORRAGO. 109.

C. *Cariopsides* 4, *topshape, distinct, 1-celled, perforated at the bottom; gynobasis flat; mouth of the corolla arched.*

Cor. funnelshape; arches upright; *calyx* 5-parted, in fruit upright..... BUGLOSSA. 111.

Cor. funnelshape; arches upright; *calyx* 5-parted, becoming bellshape, drooping ..... ANCHUSA. 112.

Cor. bellshape; arches awlshape, conical; *calyx* 5-parted ..... SYMPHYTUM. 117.

D. *Cariopsides* 4, *depressed, distinct, 4-celled; perforated at bottom; gynobasis columnar; mouth of the corolla arched.*

Calyx becoming compressed; lobes sinuated; *cariopsides* smooth ..... ASPERUGO. 110.

Calyx 5-parted; *cor.* funnelshape; arches convex; *cariopsides* prickly ..... CYNOGLOSSUM. 107.

Calyx 5-parted; *corolla* rotate; *cariopsides* smooth, cyathiform ..... OMPHALODES. 108.

I. 106. MYOSOTIS. Dioscorides. *Mouse-ear.*

Calyx 5-cut, or toothed; *corolla* salvershape, mouth with short convex, connivent scales; limb 5-parted; lobes blunt or nicked; *stamens* enclosed; *cariopsides* 4, turbinate, one-celled, bald, smooth, imperforated at bottom; *gynobasis* flat, small.—*Flowers* spiked; spike 1-sided, before flowering revolute.

1. *Myosotis sylvatica.* *Wood mouse-ear.*

Leaves oblong, lanceolate, rather blunt, with soft hairs; *racemes* very long, loose; *bracteæ* 0; *pedicells* in fruit spreading, rather longer than the calyx; *calyx* 5-cut, close; *limb* spread out, longer than the tube.

Myosotis scorpioides latifolia hirsuta, *Dillen in Raii Syn.* 229, 2.
Myosotis sylvatica, *Pers. Syn.* 1, 156.
Myosotis montana, *Besser Prod. Fl. Gall.* 1, 142.
Myosotis scorpioides sylvatica, *Horn. Hort. Hafn.* 2, 986.
Myosotis scorpioides γ, *Smith Fl. Brit.* 1, 213.

Woods; annual; all the summer.

Roots fibrous; *stems* many, upright, divided at top into very loose racemes; *leaves* fringed; upper leaves embracing; lower leaves reverse-ovate.

2. *Myosotis alpestre.* *Alp mouse-ear.*

Leaves lanceolate, rather pointed, slightly 3-ribbed, hirsute; *bracteæ* 0; *pedicells* in fruit spreading, rather longer than the calyx; *calyx* 5-cut, close; hairs long, spreading; *limb* spread out, longer than the tube.

Myosotis alpestris, *Willd. enum.* 1, 175.
Myosotis lithospermifolia, *Horn. Hort. Haffn.* 1, 173.
Myosotis scorpioides β, *Willd.*
Myosotis suaveolens, *Willd.*
Myosotis odorata, *Poiret Encyc. Bot.*
Myosotis rupicola, *Engl. Bot.* 36, 2259.
Myosotis Pyreniaca, *Poiret Mem. Toul.* 3, 323.

Alpine rocks; perennial; July.

Stems many, upright, hairy, spreading at bottom, simple at top; *racemes* terminal, short, conjugate, solitary; *flowers* before æstivation conglomerate.

3. *Myosotis palustris.* *Marsh mouse-ear.*

Leaves reverse-ovate, lanceolate, blunt, rather rough; *bracteæ* 0; *pedicells* in fruit diverging, twice as long as the calyx; *calyx* 5-cut, blunt, open; bristles straight, closely adpressed; *limb* spread out, longer than the tube.

Myosotis scorpioides palustris, *Raii Syn.* 229, 4; *Ger. em.* 337, 3.
Myosotis scorpioides repens, *Park.* 691.
Myosotis palustris, *Roth. Germ.* 221.
Myosotis perennis, *Gmel. Fl. Baden.* 1, 409.
Myosotis scorpioides, *Willd. S. P.* 1, 746.
Myosotis repens, *Don. Cat.*
Myosotis scorpioides γ, *Smith. Fl. Brit.* 212.
Echioides palustris, *Moench. Meth.* 416.
Myosotis adpressa, *Stokes Bot. M. M.* 269.
Water scorpion-grass.

Damp fields and rivulets; perennial; July and August.

Plant light green; *stems* many, rather creeping at bottom, upright, simple; *racemes* terminal, revolute before flowering, becoming upright.

4. *Myosotis arvensis.* *Cornfield mouse-ear.*

Leaves oblong, lanceolate, pointed, hirsute; *bracteæ* 0; *pedicells* in fruit spreading, twice as long as the calyx; *calyx* 5-cut, upright; bristles spread, hooked; *limb* upright, spreading, nearly as long as the tube.

Myosotis scorpioides hirsuta, *Raii Syn.* 229, 1; *Park.* 691.
Myosotis scorpioides arvensis hirsuta, *Ger. em.* 337.
Myosotis arvensis, *Roth. Germ.* 222.
Myosotis annua, *Gmel. Fl. Baden.* 1, 410.
Myosotis scorpioides, *Desfont. Fl. Atlant.* 153.
Myosotis scorpioides δ, *Smith Fl. Brit.* 1, 212.
Echioides annua, *Mœnch. Meth.* 416.
Myosotis hamosa, *Stokes B. M. M.* 269.
Mouse-ear scorpion-grass.

Dry fields; annual; June.

Root fibrous; *stems* many, branched; *racemes* terminal, revolute becoming upright and long.

5. *Myosostis versicolor.* *Changeable mouse-ear.*

Leaves lanceolate, rather blunt, hirsute; *racemes* 0; *pedicells* in fruit upright, spreading shorter than the calyx; *calyx* 5-cut, pointed; bristles spreading, hooked; *limb* spreading, shorter than the tube.

Myosotis scorpioides hirta minor, *Raii Syn.* 239, 3.
Myosotis scorpioides minor, flosculis luteis, *Park.* 692.
Myosotis versicolor, *Ehrh. Pers. Syn.* 1, 156.
Myosotis collina, *Hoffm. Fl. Germ.* 1791, 61, 4.
Myosotis arvensis β, *Gmel. Fl. Bad.* 1, 411.

Barren sandy places; annual; June.

Stems one or many, middle stem upright, side stems ascending; *racemes* terminal, spikeshape; *flowers* small, sky-blue or pale yellow.

II. 107. CYNOGLOSSUM. Dioscor. *Hounds-tongue.*

Calyx 5-parted; *corolla* funnelshape; tube short, mouth arched; arches convex, connivent; *cariopsides* 4, 1-celled, compressed, not perforated at bottom; outer side covered with glochidated prickles; affixed at the side of the columnar gynobasis.—*Leaves* tomentose or bald; *flowers* spiked or glomerate, axillary.

1. *Cynoglossum officinale.* *Shop hounds-tongue.*

Stem upright, leafy; *lower leaves* broad, lanceolate, narrower at bottom; upper leaves broader at bottom, pointed, downy, nappy; *racemes* paniculate during flowering; *bracteæ* 0; *stamens* enclosed.

Cynoglossum, *Raii Syn.* 226, 1.
Cynoglossum majus vulgare, *Ger. em.* 804, 1; *Park.* 511.
Cynoglossum maximum montanum, *Park.* 512.
Cynoglossum officinale, *Lin. S. P.* 1, 192.

Ruins and waysides; perennial or biennial; June.

Plant fœtid; *stem* upright, branched above, from the axillæ of all the upper leaves, ending in racemes; *leaves* grayish, waved; *flowers* drooping, 1-sided: *corolla* one-third longer than the calyx; tube white; limb bellshape, veined.

β. *album.* *Flowers* white.

2. *Cynoglossum sylvaticum.* *Wood hounds-tongue.*

Stem upright; *lower leaves* rather spatulate, lanceolate; upper leaves embracing the stem, ovate, oblong, pointed; above rather bald, shining; *beneath* rough; *bracteæ* 0; *stamens* enclosed.

Cynoglossum folio virenti, *Raii Syn.* 226, 2.
Cynoglossum minus folio virente, *Ger. em.* 805, 4.
Cynoglossum semper virens, *Park.* 512.
Cynoglossum officinale γ, *Lin. S. P.* 193.
Cynoglossum Virginianum, *Lin. Syst. Veg.* 157.
Cynoglossum sylvaticum, *Gmelin Baden.* 1, 421.
Cynoglossum montanum, *Lamarck Illustr.* 1794.
Cynoglossum Virginicum, *Willd. S. P.* 1, 762.
Cynoglossum Apenninum, *Roth Tent. Germ.* 2, 219.
Cynoglossum virens, *Schreber Fl. Lips.* 162.
Cynoglossum Germanicum, *Jacq. Obs.* 2, 31.
Small green-leaved hounds-tongue.

Waysides; biennial; June.

Root fusiform; *stems* many, below simple, above branched; *branches* upright, spreading; *leaves* flat, above light green, bald; *racemes* terminal, drooping at top before flowering.

III. 108. OMPHALODES. *Venus-navelwort.*

Calyx 5-parted; *corolla* rotate; mouth arched; arches short, connivent; limb 5-parted; lobes blunt; *cariopsides* 4, 1-celled, compressed, smooth; edge membranaceous, often cyathiform; bottom not perforated; gynobasis columnar. —*Flowers* spiked, glomerate.

Omphalodes verna. *Spring Venus-navelwort.*

Leaves petioled, smooth; root-leaves ovate, heartshape; stem-leaves ovate; *racemes* conjugate, few-flowered.

Cynoglossum omphalodes, *Lin. S. P.* 193.
Omphalodes verna, *Mœnch. Meth.*
Omphalodes repens, *Schrank.*

Rocks at Teignmouth, Mrs. Turner; perennial; March and April.

Rhizoma creeping, buried; *stems* many; flowering stems simple, emitting stools at the bottom; *bracteæ* 2; *flowers* peduncled, blue.

IV. 109. BORRAGO. Marcellus. *Borrage.*

Calyx 5-parted; *corolla* rotate, mouth arched, arches blunt, nicked; *anthers* distinct, oblong or lanceolate; *cariopsides* 4, 1-celled, topshape, imperforated at bottom; gynobasis small, flat.

Borrago officinalis. *Shop borrage.*

Lower leaves reverse ovate, narrowed at the base; *lobes* of the corolla ovate, pointed, spread out.

Borrago hortensis, *Raii Syn.* 228; *Ger. em.* 796, 1.
Borrago, *Park.* 249.
Borago officinalis, *Lin. S. P.* 197.

Road-sides; annual;

Root fusiform; *stem* upright, hispid, branchy; branches upright, spreading; *leaves* hispid; flowers drooping; *pedicells* long, 1-sided.—*Racemes* terminal, short, bracteated; *corolla* skyblue; *stamens* and *arches* black.

β. *alba.* *Flower* white.

Borrago flore albo, *Ger. em.* 797, 2.

V. 110. ASPERUGO. Pliny. *Madwort.*

Calyx round, deeply 5-cut, with teeth between the cuts, becoming long and compressed; lamellæ flat, parallel, sinuated, toothed; *corolla* rather funnelshape, mouth arched; arches convex, connivent; *filaments* short; *anthers* rounded; *stigma* capitate; *cariopsides* 4, 1-celled, smooth, compressed, not perforated at bottom; gynobasis columnar.

Asperugo procumbens. *Procumbent madwort.*

Asperugo vulgaris, *Raii Syn.* 228.
Aparine major Plinii, *Ger. em.* 1122, 2.
Borrago minor sylvestris, *Park.* 765.
Asperugo procumbens, *Lin. S. P.* 198.
Great goose-grass. German madwort.

Rich waste land; annual; April and May.

Root slender; *stem* procumbent, flagelliform, branchy, with small hooked spines; *leaves* in threes or fours, oblong, obtuse; rough above; rather baldish beneath; edges hairy, hooked; *flowers* from the side of the leaf, solitary, purplish.

β. *alba.* *Flowers* white.

VI. 111. BUGLOSSA. Dioscorides. *Bugloss.*

Calyx 5-parted; *corolla* funnelshape; mouth closed; arches upright, blunt; *cariopsides* 4, 1-celled, topshape, concave, perforated at bottom; gynobasis flat, small.—*Flowers* racemose; *fruit* upright.

1. *Buglossa arvensis.* *Field bugloss.*

Stem upright, branchy; *leaves* lanceolate, half-embracing, subrepand, toothed, strigose, very rough; *racemes* leafy; *calyx* as long as the bent tube; *lobes* of the corolla unequal, lanceolate.

Buglossa sylvestris minor, *Raii Syn.* 227, 1; *Ger. em.* 799, 3.
Buglossum sylvestre minus, *Park.* 765.
Lycopsis arvensis, *Lin. S. P.* 199.
Anchusa arvensis, *Hoffm. et Link Fl. Lusit.* 1, 179.
Small wild bugloss.

Way-sides; annual; June and July.

Root fusiform; *stem* upright or ascending, branched; *leaves* wavey; *hairs* sitting on tubercles; *racemes* terminal; *pedicells* short; *corolla* blue, finely veined with white.

2. *Buglossa sempervirens.* *Evergreen bugloss.*

Stem upright; *leaves* ovate, scarcely toothed, hispid; upper sessile; lower longly peduncled; *peduncles* axillary, 2-leaved; *racemes* conjugate, rather capitate; *lobes* of the corolla equal.

Buglossum latifolium semper virens, *Dillen in Raii Syn.* 227, 2.
Borago semper virens, *Ger. em.* 797, 3.
Anchusa sempervirens, *Lin. S. P.* 192.
Buglossum sempervirens, *Allioni Pedem.* 166.

Waysides; perennial; May and June.

Stem upright, extremely rough, bristles turned backwards; *leaves* pointed, rough on both sides, edges waved; *calyx* deeply 5-parted; *corolla* nearly rotate, blue; tube very short; limb horizontal, 5-parted; lobes rounded, equal; *foramina* of the cariopsides closed with a scale.

VII. 112. ANCHUSA. Hippocrates. *Alkanet.*

Calyx 5-cut or toothed, becoming bellshaped and inflated; *corolla* funnelshaped, 5-lobed; lobes equal; mouth closed; arches upright, blunt; *cariopsides* 4, 1-celled, turbinate, perforated at the base; gynobasis flat, small.—*Flowers* racemose; *fruit* drooping.

Anchusa officinalis. *Shop alkanet.*

Leaves lanceolate, hispid; *bracteæ* ovate, lanceolate, as long as the calyx; *calyx* 5-cut, pointed.

Buglossa vulgaris, *Ger. em.* 798, 1.
Anchusa officinalis, *Lin. S. P.* 191.

Waste places by the sea; perennial; June and July.

Stems many, upright, branched at top; *leaves* pointed, not in the least cut; *flowers* sessile, imbricated; *spikes* terminal; *tube* of the corolla as long as the calyx, constricted under the limb; limb upright, spreading; *lobes* rounded; *mouth* closed with 5 upright arches.

β. *incarnata.* *Flowers* red, variegated.

γ. *alba.* *Flowers* white.

VIII. 113. PULMONARIA. Gesner. *Lungwort.*

Calyx 5-cut, prismatic, 5-sided, when in fruit bellshape; *corolla* funnelshape; *mouth* pervious, hairy; *cariopsides* 4, 1-celled, topshape, not perforated at bottom; *gynobasis* flat, small.

1. *Pulmonaria angustifolia.* *Narrowleaved lungwort.*

Leaves pubescent, hirsute, lanceolate; root-leaves petiolate; stem-leaves sessile, half embracing the stem.

Pulmonaria foliis echii, *Raii Syn.* 226, 1; *Ger. em. ed.* 2, 808.
Pulmonaria maculosa, *Ger. em. ed.* 1, 808, 1.
Pulmonaria angustifolia, *Park. Par.* 251, 2; *Lin. S. P.* 191.
Pulmonaria maculata β, *Stokes Bot. Mat. Med.* 278.
Bugloss cows-lips. Long-leaved stage of Jerusalem.

Woods; perennial; May.

Root branched, black; *stem* upright, roundish, simple; *leaves* pointed; *hairs* short, pressed to the stem; *flowers* pedicelled; *bracteæ* lanceolate; *racemes* 2, terminal, in bundles.

β. *oblongata.* *Leaves* small, short, broad, and blunt.

2. *Pulmonaria officinalis.* *Shop lungwort.*

Leaves rough; *root-leaves* ovate, cordate, petioled; *upper stem-leaves* sessile, ovate, oblong.

Pulmonaria foliis echii, *Ger. em. ed.* 1, 808, 2.
Pulmonaria maculosa, *Ger. em. ed.* 2, 808, 1.
Pulmonaria latifolia maculosa, *Park.* 251.
Pulmonaria officinalis α, *Lin. S. P.* 194.
Pulmonaria maculata γ, *Stokes Bot. Mat. Med.* 280.
Jerusalem cows-lips. Spotted lungwort. Broad-leaved lungwort.

Woods; perennial; May.

Stems many, simple, upright; *leaves* pointed; upper stem-leaves with short petioles; lower sessile, ovate, oblong; *flowers* purple, pedicelled, when in fruit drooping.—Yields a large quantity of ashes when burned.

IX. 114. MERTENSIA. Roth. *Mertens.*

Calyx deeply 5-parted; *corolla* rather funnelshape; tube much longer than the calyx; limb rather bellshape; lobes short, rounded; mouth pervious, naked; *filaments* as long as the tube; *anthers* oblong; *stigma* capitate; *cariopsides* 4, 1-celled, ovate, imperforate at the base; gynobasis flat, small.—*Radical leaves* growing after flowering; *flowers* racemose.

Mertensia maritima. *Sea mertens.*

Stem procumbent, branched; *leaves* ovate, blunt, fleshy, bald, glaucous; *calyx* bald.

Echium marinum, *Raii Syn.* 228, 1.
Buglossum dulce ex insulis Lancastriæ, *Park.* 765?
Pulmonaria maritima, *Lin. S. P.* 195.
Pulmonaria procumbens, *Stokes Bot. M. M.* 281.
Sea bugloss.

Sea-shore; perennial; July.

Root fusiform; *stems* many, procumbent or ascending; *lower leaves* petioled; *upper* half-embracing the stem; *racemes* terminal, rather corymbose; *flowers* pedicelled, upright.—Narcotic.

X. 115. ÆGONYCHON. *Bastard-alkanet.*

Calyx 5-parted, shorter than the corolla; *corolla* funnel-shape; mouth naked, pervious; *anthers* oblong, enclosed; *cariopsides* 4, 1-celled, ovate, imperforate at the bottom; gynobasis flat, small.—*Leaves* not growing after flowering, not veined; *flowers* axillary, solitary; *racemes* leafy.

1. *Ægonychon repens.* *Creeping bastard-alkanet.*

Stem herbaceous: barren stems creeping; flowering stems upright; *leaves* lanceolate, pointed, attenuated at the base, rough; *cariopsides* stony, smooth, bald.

Lithospermum majus Dodonæi, flore purpureo, semine anchusæ, *Raii Syn.* 229, 2.
Lithospermum majus, *Ger. em.* 609, 1.
Lithospermum vulgare majus, *Park.* 2131.
Lithospermum purpureo-cæruleum, *Lin. S. P.* 190.
Lithospermum repens, *Stokes Bot. M. M.* 271.
Lithospermum violaceum, *Lamarck Fl. Fr.* 271.
Great gromwell. Pearl plant. Lichwale.

Chalk woods; perennial; May.

Root branched, black; *stems* many; middle stems upright; all the rest decumbent, simple; *leaves* stiff; petioles short; *corolla* violet or flesh-colour, rarely white; *cariopsides* white.

2. *Ægonychon arvense.* *Field bastard-alkanet.*

Stem herbaceous, upright, branched; *leaves* lanceolate, narrowed at the base, pointed, hirsute, rather fringed; *calyx* rather shorter than the corolla, spreading when in fruit; *cariopsides* wrinkled, rough.

Buglossum arvense annuum, lithospermi folii, *Raii Syn.* 227.
Anchusa degener facie milii solis, *Ger. em.* 610, 4.
Lithospermum arvense radice rubente, *Park.* 432.
Lithospermum arvense, *Lin. S. P.* 190.
Bastard gromwell. Bastard alkanet.

Fields; annual; May and June.

Root branched, reddish; *stems* upright, above branched; hairs adpressed; *leaves* sessile; *flowers* sessile; *corolla* whitish yellow; *cariopsides* oval, white.—*Root* tinges oil red; juice of the root used to dye the face red.

XI. 116. LITHOSPERMUM. Dioscorides. *Gromwell.*

Calyx 5-parted; lobes unequal, growing connivent; *corolla* nearly bellshape; mouth nearly closed with 5 upright rotate tubercles; *anthers* nearly sessile, oblong; *cariopsides* 4, 1-celled, ovate, imperforate at the bottom; gynobasis small, flat.—*Leaves* veined; radical leaves not enlarging after flowering; *flowers* axillary.

Lithospermum officinale. *Shop gromwell.*

Stem herbaceous, round, upright, very much branched; *leaves* broad, lanceolate, veined, pointed, very rough; *tube* of the corolla as long as the calyx.

Lithospermum seu milium solis, *Raii Syn.* 228, 1.
Lithospermum minus, *Ger. em.* 609, 2.
Lithospermum vulgare minus, *Park.* 432.
Lithospermum officinale, *Lin. S. P.* 189.
Lithospermum ochroleucum, *Stokes Bot. M. M.* 270.
Small gromwell. Gray mill. Grey millet.

Edges of fields; perennial; May.

Root branched; *stem* straight, much branched above; *leaves* nearly sessile, above dark green, below paler; *flowers* yellow; *cariopsides* smooth, bald.

XII. 117. SYMPHYTUM. Dioscorides. *Comfrey.*

Calyx 5-parted; *corolla* cylindrical, bellshape, mouth closed; arches awlshape, forming a cone; *nuts* 4, 1-celled, perforated at the base; *gynobasis* flat, small.

1. *Symphytum tuberosum.* *Tuberous comfrey.*

Stem simple; *leaves* ovate, oblong, narrower at the base; lower leaves petiolate; upper leaves sessile, rather decurrent.

Symphytum tuberosum, *Ger. em.* 806, 3; *Lin. S. P.* 195.

Moist shady places; perennial; July.

Root tuberous, creeping, white on the outside; *stem* divided at top into 2 peduncles; *leaves* not in the least cut, above hairy, beneath smoother and paler, much veined; *racemes* terminal, drooping.

2. *Symphytum officinale.* *Shop comfrey.*

Stem branched, above winged; *leaves* ovate, lanceolate, narrower at the bottom, decurrent, above very rough, beneath hirsute; *calyx* pointed, hirsute.

Symphytum magnum, *Raii Syn.* 230, 1.
Consolida major, *Ger. em.* 805, 2.
Symphytum majus vulgare, *Park.* 523.
Symphytum officinale, *Lin. S. P.* 195.
Great comfrey. Great consound. Knit-back. Black-wort.

Watery places; perennial; May.

Root cylindrical, black; *stems* many, 3 feet high; *leaves* waved; root-leaves ovate; *racemes* terminal, conjugate, 1-sided, drooping, becoming upright; *corolla* bellied, white or yellowish.—Root astringent, glutinous, mucilaginous; the decoction extracts the colour from seed lac; leaves flavour cakes and panada; shoots a good pot-herb.

β. *purpureum.* *Corolla* purple or reddish; *calyx* expanding, shorter than the tube of the corolla.

Consolida major flore purpureo, *Ger. em.* 806, 1.
Symphytum patens, *Sibthorp Fl. Ox.* 70.
Symphytum Behenium, *Schmidt Fl. Bohem.* 3, 212.

XIII. 118. ECHIUM. Dioscorides. *Vipers-bugloss.*

Calyx 5-parted; *corolla* funnelshape or bellshape; mouth enlarged, naked; lobes mostly unequal; *nuts* 4, 1-celled, topshape, rough, imperforate at bottom; gynobasis small, flat.—*Stem* herbaceous.

1. *Echium Italicum.* *Italian vipers-bugloss.*

Stem simple, stiff; *leaves* linear, lanceolate, strigose, hispid; *racemes* very long, spike-like; spikelets 2-cut, short; *flowers* close; *lobes* of the corolla nearly equal; *stamens* twice as long as the corolla.

Echium q. Lycopsis, *Raii Syn.* 227, 2.
Lycopsis, *Park.* 519.
Echium Italicum, *Lin. S. P.* 200.
Echium asperrimum, *Buberst. Fl. Taur.* 1, 135.
Echium altissimum, *Jacq. Fl. Austr.* 5, 35.
Echium linearifolium, *Mœnch. Meth. Supp.* 149.
Wall bugloss.

Sandy grounds, Jersey; biennial? July.

Stem simple or many, upright, 4 feet high, spotted with dark purple; *flowers* sessile, imbricate, 1-sided, in many spikelets; *corolla* whitish.

2. *Echium vulgare.* *Common vipers-bugloss.*

Stem mostly simple, tubercular, hispid; *leaves* linear, lanceolate, hispid; *racemes* terminal, spikeshaped, very long; spikelets simple, spreading; *stamens* longer than the corolla.

Echium vulgare, *Raii Syn.* 227, 1; *Ger. em.* 802, 2; *Park.* 414; *Lin. S. P.* 200.

Fields and wastes; biennial; June and July.

Root branched, thick; *stems* many, simple, upright; *leaves* hispid; *flowers* imbricate; spikes short, axillary; *pedicells* upright, spreading.—Root chewed, used as a poultice in venomous bites.

β. *violaceum.* *Stem* branched from the bottom, spreading and often decumbent; *stamens* very long.

Echium alterum, sive lycopsis Anglica, *Dillen in Raii Syn.* 228, 3.
Echium vulgare β, *Hudson Fl. Angl.* 83.
Echium violaceum, *Schmidt Fl. Bohem.* 203, 3.

γ. *album.* *Corolla* white.

Fam. XV. 32. LABIATÆ. Jussieu. *Stachydeæ*, R. A. Salisbury.

Calyx 1-leafed, tubular, persisting, 4 or 5-cut; *corolla* lipped, ringent, or irregular; *stamens* 2 or 4, often didynamous, inserted on the corolla; *ovary* 1, free, 4-lobed; *style* 1, on the receptacle or gynobasis, between the lobes of the ovary; *stigma* mostly 2-cut; *microbasis* (cariopsides 4) at the base of the calyx; *perisperm* 0; corculum straight; radicle below; cotyledons flat.—*Stem* herbaceous, rarely shrubby, 4-sided; *hairs* distinctly partitioned; *leaves* opposite; *flowers* mostly in bundles, disposed in close panicles forming spurious whirls, rarely solitary, sometimes terminal and capitate, bracteated.

a. *Stamens* 2, *corolla not lipped.*

Upper lobe of corolla nicked ..... Lycopus. 119.

b. *Stamens* 2; *corolla lipped; filaments* 1-*toothed.*

Galea arched; *filam.* toothed in the middle Salvia. 147.
Galea arched, not compressed ..... Horminum. 149.
Galea compressed ..... Sclarea. 148.

c. *Stamens* 4; *corolla not lipped.*

Calyx 5-cut, slightly hairy; *upper lobe* of the corolla nicked ..... Mentha. 120.

Calyx 5-cut; mouth hairy; *upper lobe* of the corolla not nicked ..... PULEGIUM. 121.

d. *Stamens* 4; *upper lip of the corolla truncated.*

Corolla truncated above, 2-toothed; *cariopsides* reticulated ..... BUGULA. 122.

Corolla above deeply cut; *calyx-teeth* rather unequal ..... CHAMÆDRYS. 123.

Corolla deeply cut above; upper tooth very broad ..... SCORODONIA. 124.

e. *Stamens* 4; *corolla* 2-*lipped; lips distant; calyx irregular, not lipped.*

Galea slender, spread, 2-parted; *calyx* spread ..... LAVANDULA. 125.

Galea slender; mouth toothed on each side; *anthers* hirsute ..... LAMIUM. 132.

Galea slender, mouth 2-toothed below; *anthers* bald ..... GALEOPSIS. 134.

Galea slender, mouth not toothed; *sarcoma* round the ovary; *anthers* coherent ..... GLECHOMA. 131.

Galea slender, mouth not toothed; *sarcoma* 0; *middle lobe* of the lip rounded, concave ..... NEPETA. 126.

f. *Stamens* 4; *corolla* 2-*lipped; lips distant; galea slender; mouth not toothed; sarcoma* 0; *middle lobe of the lip flattened or deflected; calyx irregular, not lipped.*

Bracteæ 0; *calyx* baldish on the inside; *tube* of corolla short, rather gibbous ..... STACHYS. 128.

Bracteæ 0; *calyx* baldish on the inside; *tube* long, curved, not gibbous ..... BETONICA. 127.

Bracteæ 0; *calyx* bald on the inside; *tube* short; *lip* obtusely 3-lobed ..... TRIXAGO. 129.

Bracteæ 0; *calyx* bald on the inside; *tube* short; *lip* acutely 3-lobed; *anthers* bald GALEOBDOLON. 133.

Bracteæ 0; *calyx* bald on the inside; *tube* short; *lip* acutely 3-lobed; *anthers* spotted ..... CARDIACA. 135.

Bracteæ 0; *calyx* woolly inside, enlarged above; *tube* short ..... ERIOSTOMUM. 130.

Bracteæ 0; *calyx* bearded inside, cylindrical; *tube* middling long ..... SATUREJA. 143.
Bracteated; calyx bearded inside, cylindrical; *flowers* densely spiked..... ORIGANUM. 138.

g. *Stamens* 4; *corolla 2-lipped; calyx regular, not 2-lipped.*

Galea not cut; *lip* unequally 3-lobed ... BALLOTA. 136.
Galea 2-cut; *calyx* 10-toothed .... MARRUBIUM. 137.

h. *Stamens* 4; *corolla 2-lipped; calyx 2-lipped, 5-cut; filaments not 2-forked.*

Involucrum from the secondary bracteæ; *calyx* bald inside; *galea* nicked ..... CLINIPODIUM. 144.
Involucrated; flowers densely spiked; *calyx* cylindrical, inside bald ..... MAJORANA. 139.
Invol. 0; *calyx* cylindrical; *middle lobe* of the lip of the corolla not cut..... THYMUS. 140.
Invol. 0; *calyx* cylindrical; *middle lobe* 2-cut..... CALAMINTHA. 142.
Invol. 0; *calyx* gibbous at the base..... ACINOS. 141.
Invol. 0; *calyx* enlarged above ..... MELISSA. 145.

i. *Stamens* 4; *corolla 2-lipped; calyx 2-lipped, 5-cut; filaments 2-forked.*

Stigma 2-cut ..... BRUNELLA. 150.

k. *Stamens* 4; *corolla 2-lipped; calyx 2-lipped, 2 to 4-cut.*

Calyx 3 or 4-cut ..... MELITTIS. 146.
Calyx 2-cut..... SCUTELLARIA. 150.

I. 119. LYCOPUS. Fuchs. *Gypsey-wort.*

Calyx 4 or 5-cut, irregular, not 2-lipped; mouth naked; *corolla* not lipped, tubular or 4-cut; upper lobe naked; *stamens* 2, diverging; *ovary* girt by a yellow gland, or sarcoma.—*Hairs* distinctly partitioned, joints short, not swelled at the base; *flowers* axillary, sessile, in spurious whirls.

1. *Lycopus riparius.* *Bankside gypsey-wort.*
Stem rather hairy; *leaves* oval, lanceolate, usually sinuated, serrated, rather hairy.

Lycopus palustris glaber, *Raii Syn.* 236, 1.
Marrubium aquaticum, *Ger. em.* 700, 1.
Marrubium aquaticum vulgare, *Park.* 1230.
Lycopus europæus, *Lin. S. P.* 30.
Lycopus vulgaris, *Pers. Syn.* 24.
Lycopus riparius, *Salisb. Prod.* 72.
Water horehound.

Bank-sides by water; perennial; July to September.

Stem upright; *leaves* petioled; *calyx* downy; *corolla* whitish purple; *lower lobes* spotted on the inside, sometimes with 2 filaments, which rarely have barren anthers.—*Root* astringent; juice strains the flesh brown, gives a durable stain to linen, woollen, and silk; and dyes a black with green vitriol.

β. *incisus.* *Leaves* deeply divided, nearly pinnatifid.

II. 120. MENTHA. Theophrastus. *Mint.*

Calyx 5-cut, irregular, not 2-lipped; inside bald or slightly hairy; *corolla* little longer than the calyx, 4-lobed; lobes nearly equal; upper lobe nicked; *stamens* 4, didynamous, diverging.—*Rhizoma* creeping; *herb* odoriferous.

a. *Calyx entirely hirsute.*

1. *Mentha sylvestris.* *Wild mint.*

Leaves heartshape, lanceolate, unequally toothed, serrate; tomentose beneath; *racemes* terminal, oblong; *bracteæ* awl-shape; *calyx* villous; hairs longer than the breadth of the segments; *stamens* exserted.

Mentha spicata q. Menthastrum spicatum folio longiore candicante J. Bauhini, *Raii Syn.* 234, 5.
Mentha sylvestris, *Lin. S. P.* 804.
Mentha spicata longifolia, *Lin. S. P. ed.* 1, 576.
Mentha sylvestris α, *Huds. Fl. Angl.* 250.
Mentha longifolia, *Huds. Fl. Angl. ed.* 1, 221.
Mentha villosa 1, *Sole Menth. Brit.* 3.
Mentha tomentosa, *Stokes Bot. M. M.* 312.
Mentha candicans, *Miller Dict.*
Horse mint.

Damp rubbish and road-sides; peren.; Aug. and Septem.

Stem tomentose; hairs deflexed; *upper leaves* lanceolate, pointed; *racemes* compounded of whirls, many-flowered; *peduncles* hairy; hairs closely deflected; *bracteæ* the length of the flowers.—Aromatic.

2. *Mentha villosa.* *Villous mint.*

Leaves ovate or elliptical, wrinkled, unequally serrate; villous beneath; *racemes* terminal; *bracteæ* awlshape; *calyx* rather hirsute; hairs straight; *lobes* triangular, awlshape; *stamens* as long as the corolla.

Mentastrum, *Ger. em.* 684, 3. Figure only.
Mentha sylvestris, *Fl. Dan.* 484.
Mentha villosa 2, *Sole Menth. Brit.* 610.
Mentha nemorosa, *Willd. S. P.* 375.
Mentha sylvestris β, *Smith Fl. Brit.* 610.
Mentha villosa, *Huds. Fl. Angl.*

Road-sides; perennial; August and September.

Stem purplish at bottom; *leaves* sessile or with short peduncles, pointed; *racemes* narrow; *sinuses* of the calyx blunt.

β. *candicans.* *Leaves* short; *spikes* blunt.

Mentha candicans, foliis, spicis et odore vulgari sativæ similis, *Raii Syn.* 234, 5.*

γ. *alopecuroides.* *Leaves* elliptical, broad, blunt.

Mentha alopecuroides, *Hull Br. Fl.* 126.
Mentha rotundifolia, *Sole Menth. Br.* 9.

3. *Mentha rotundifolia.* *Round-leaved mint.*

Leaves elliptical, blunt, wrinkled, crenate, pilose above, tomentose beneath; *racemes* terminal, hirsute, interrupted; *bracteæ* lanceolate, hirsute; *lobes* of the calyx awlshape, triangular, fringed; fringe shorter than the breadth of the lobes.

Mentha spicata q. menthastrum folio rugoso rotundiore spontaneum, flore spicato, odore gravi J. Bauhini, *Raii Syn.* 234, 6.
Mentastrum, *Ger. em.* 684, 3, description.
Mentha crispa, *Lin. S. P. ed.* 1, 446.
Mentha rotundifolia, *Lin. S. P.* 805.
Mentha sylvestris, *Sole Menth. Br.* 7, 3.

Rubbish; perennial; August and September.

Stem 3 feet high, pilose, hairs deflexed; *leaves* sessile, acutely crenated; lower leaves elliptical, oblong; *racemes* panicled; *whirls* rather remote; hairs of the pedicells deflexed; *stamens* exserted.—Odour peculiar, stimulant; of great use in chlorosis, and in removing the dull languor after epileptic fits.

β. *variegata.* *Leaves* variegated with green.

Mentastrum niveum Anglicum, *Ger. em.* 684, 4.

4. *Mentha glomerata.* *Glomerated mint.*

Leaves ovate, petioled; *terminal whirls* rounded; *pedicells* hispid backwards; *calyx* hirsute on every side.

Mentha spicata q. Sisymbrium hirsutum Doody, *Raii Syn.* 233, 7.
Mentha (spicata) aquatica seu Sisymbrium, *Raii Syn.* 233, 6; *Ger. em.* 684, 2.
Mentha hirsuta, *Lin. Mant.* 81.
Mentha aquatica, *Huds. Fl. Angl.* 252, α, β.
Mentha hirsuta, *Smith T. L. S.* 5, 193.
Mentha glomerata, *Stokes Bot. Mat. Med.* 616.
Water Mint.

Watery places; perennial; August and September. Very variable in form.

Flowers capitate; *leaves* pubescent; *stem* hirsute, hairs deflected, pressed to the stem; *stamens* longer than the corolla; *bracteæ* lanceolate, hirsute; *peduncles* very hirsute; hairs white, reflexed; *calyx* furrowed.—Stimulant; used in sauces as a carminative, odour peculiarly grateful.

β. *aurantiaca.* *Flowers* capitate, head and leaves smaller and rounder than the preceding: odour like that of oranges.

Mentha (spicata) sisymbrium dicta hirsuta, glomerulis ac foliis minoribus et rotundioribus, *Dillen in Raii Syn.* 233, 8.

γ. *piperita.* *Flowers* capitate; *leaves* nearly bald; *stamens* shorter than the corolla.

Mentha nigricans, *Miller's Dict.*
Mentha piperita, *Lin. S. P.* 805.
Mentha piperita β, *Huds. Fl. Angl.* 251.

δ. *palustris.* *Flowers* spiked or capitate; *spike* leafless; *lower whirls* peduncled; *leaves* hairy, pale beneath.

Mentha spicata q. menthastri aquatici genus hirsutum, spica latiore J. Bauhini, *Raii Syn.* 234, 4.
Mentha aquatica, *Miller Dict.*
Mentha palustris, *Sole Menth.* 13, 6.

ε. *paludosa.* *Flowers* spiked, in whirls; *whirls* close together; *stamens* as long as the corolla; *odour* like marjoram.

Mentha paludosa, *Sole Menth.* 49, 22.

ζ. *sativa.* *Flowers* in whirls; *whirls* peduncled; *stamens* longer than the corolla, or variable; *leaves* hirsute.

Mentha verticillata; varietas hirsutie foliorum discrepans, *Raii Syn.* 232, 4. *
Mentha verticillata, *Lin. S. N. ed.* 10, 1099; *Huds. ed.* 1, 222.
Mentha sativa, *Lin. S. P.* 805.
Mentha rivalis, β, γ, et δ, *Sole Menth.* 45.
Mentha arvensis, var. *Withering Bot. Arr.*

η. *glabra.* *Flowers* in whirls; *leaves* roundish, bald.

Mentha aquatica verticillata glabra, rotundiore folio, *Dillen in Herb. Sherard.*

θ. *exigua.* *Flowers* in whirls, very small; *odour* very fragrant.

Mentha (verticillata) aquatica exigua, *Dillen in Raii Syn.* 232, 2.

5. *Mentha acutifolia.* *Sharpleaved mint.*

Leaves ovate, lanceolate, pointed at both ends, unequally serrate; *flowers* in whirls; whirls sessile; *calyx* covered with hairs; *pedicells* hairy; hairs horizontal; *stamens* shorter than the corolla.

Mentha verticillata, *Miller Dict.*
Mentha acutifolia, *Smith T. L. S.* 5, 203.

Edges of fields; perennial; September.

Stem nearly simple; hairs deflexed; *petioles* short; *leaves* not serrated at top and bottom; *whirls* nearly equal, many-flowered; *bracteæ* linear; *calyx* tubular; hairs ascending; *mouth* of the corolla hairy.

6. *Mentha arvensis.* *Field mint.*

Stem very branched; *leaves* in whirls, ovate or elliptical, rather blunt; *flowers* in whirls; *calyx* bellshape, hirsute in every part; *hairs* horizontal.

Mentha aquatica, *Raii Syn. ed.* 1, 78.
Mentha (verticillata) seu calamintha aquatica, *Raii Syn.* 232, 1.
Calamintha aquatica, *Ger. em.* 684, 2.
Mentha arvensis, *Lin. S. P.* 806.
Water calamint.

Inundated sandy meadows; perenn.; June to September.

Stem very diffuse; *leaves* petioled; *whirls* many-flowered, nearly sessile; *bracteæ* lanceolate; *pedicells* bald at bottom, very hairy at the tip; *calyx* short; *corolla* hairy within; *stamens* exserted.

β. *major.* *Leaves* broad; *whirls* and *flowers* large; *stamens* exserted; *odour* grateful.

Mentha arvensis major, *Sole Menth. Br.* 29. γ.

γ. *præcox.* *Stem* erect; *leaves* recurved, elliptical; *flowering* early; *corolla* slightly hairy on the outside; *stamens* enclosed.

Mentha præcox, *Sole Menth. Br.* 31, 13.

δ. *gentilis.* *Leaves* short, broad, round; *stamens* enclosed; *odour* like basil.

Mentha verticillata arvensis folio rotundiore, odore aromatico, *Raii Syn.* 232, 3.
Mentha gentilis, *Miller, Dict.*

ε. *agrestis.* *Stem* upright; *leaves* very broad, nearly heart-shape; veins very strong, parallel; *stamens* enclosed.

Mentha agrestis, *Sole Menth. Br.* 33, 14.

b. *Calyx bald at the base.*

7. *Mentha gracilis.* *Slender mint.*

Stem upright, very much branched; *leaves* lanceolate, acute, serrated, nearly sessile; *flowers* in whirls; *peduncles* and base of the calyx quite bald.

Mentha (verticillata) fusca sive vulgaris, *Raii Syn.* 232, 5; *Park.* 31.
Mentha rubra, *Huds. Fl. Angl.* 252.
Mentha gentilis, *Engl. Bot.* 449.
Mentha gracilis, *Sole Menth. Brit.* 37, 16.
Red mint.

Watery places and damp fields; perennial; August.

Stem rough-sided, much branched in the middle; *leaves* light green, both sides slightly hirsute; *whirls* nearly sessile; *bracteæ* lanceolate; *calyx* tubular, bellshaped, purple; apex and teeth hirsute; *stamens* enclosed; *odour* like that of m. viridis.

β. *cardiaca.* *Stem* upright, nearly smooth, dark brown; *leaves* smooth, long, narrow, deep green; lower leaves with short peduncles; upper sessile; *odour* like basil.

Mentha cardiaca, *Ger. em.* 680, 4.
Mentha gentilis, *Sole Menth. Brit.* 35, 15.
Heart mint. Heart wort.

8. *Mentha gentilis.* *Elegant mint.*

Stem very much branched, spreading; *leaves* ovate, blunt, serrated; *flowers* in whirls; *pedicell* and *base* of the calyx bald.

Mentha gentilis, *Lin. S. P.* 805.
Mentha rubra, *Sole Menth. Brit.* 41, 8.

Watery places and ruins; perennial; August.

Stem upright, 12 inches high, rough; *branches* long; *leaves* petioled, light green, rather hirsute on both sides; *whirls* nearly sessile; *bracteæ* lanceolate; *calyx* hairy above; *stamens* enclosed.

β. *rivalis.* *Stem* 3 feet high, rough; *leaves* long, nearly elliptical.

Mentha nivalis α, *Sole Menth. Brit.* 41, 18.

γ. *variegata.* *Leaves* variegated with yellow and white; *whirls* sessile, rarely pedicelled; *pedicells* rarely slightly hairy; hairs deflexed.

Mentha variegata, *Sole Menth. Brit.* 43, 19.

9. *Mentha rubra.* *Red mint.*

Stem upright, flexuous, bald; *leaves* ovate, petioled, inciso-serrated; *flowers* in whirls; whirls peduncled; *peduncles* and *calyx* quite bald; *teeth* of the calyx hirsute.

Mentha verticillata, *Raii Syn.* 232, 4.
Mentha sativa rubra, *Ger. em.* 680, 1.
Mentha crispa, *Park.* 31.
Mentha rubra, *Smith Tr. Lin. Soc.* 5, 205.
Mentha sativa, *Sole Menth. Br.* 47, 24.

Edges of rivers; perennial; September.

Stem 6 feet high, slightly branched, bald; *leaves* dark green, shining; upper small and roundish; *bracteæ* linear; *pedicells* shining; *flowers* rather large, bald.

β. *crispa.* *Leaves* crisped.

Mentha crispa verticillata folio rotundiore, *Raii Syn.* 232, 4.*

γ. *pratensis.* *Stem* branched at the top, changing from pale green to dark brown; *leaves* harsh, wrinkled, hairy, deeply serrated, hanging down close to the stem.

Mentha pratensis, *Sole Menth. Br.* 39, 17.

10. *Mentha odorata.* *Sweetscented mint.*

Leaves petioled, heartshape, rather blunt, serrated, both sides naked; *pedicells* and *calyx* quite bald; *flowers* capitate; head quite blunt.

Mentha rubra, *Miller Dict.*
Mentha odorata. *Sole Menth. Brit.* 21, 9.
Bergamot mint.

Watery places; perennial; July and August.

Herb quite bald, reddish; *stem* upright, much branched; *spikes* terminal, very short, dense; lower whirl remote, slightly peduncled; *bracteæ* bristlelike; *calyx* slender, furrowed; tube and teeth entirely bald; *stamens* included; odour like oranges.

11. *Mentha piperita.* *Pepper mint.*

Spike blunt, interrupted below; *leaves* petioled, rather ovate, nearly bald; *calyx* quite bald at the base; *stamens* enclosed.

Mentha piperata, *Huds. Fl. Angl.* 251.
Mentha piperata officinalis, *Sole Menth. Br.* 15, 7.
Mentha officinalis, *Hull. Br. Fl.* 227.

Watery places; perennial; August and September.

Stem 2 feet high, much branched; hairs recurved; *leaves* ovate, lanceolate, acute, serrated, dark green, pale beneath; *spike* solitary, long; lower whirl very remote, peduncled;

bracteæ fringed; *odour* pungent; *taste* bitter aromatic.—Stem and leaves covered with glands containing a carminative and antispasmodic oil.

β. *vulgaris.* *Leaves* ovate, short, rather elliptical; *spikes* short, blunt, and like a head.

Mentha (spicata) spicis brevioribus et habitioribus, foliis menthæ fuscæ, sapore fervido piperis, *Raii Syn.* 234, 7.
Mentha piperita, *Hull Br. Fl.* 127.
Mentha piperita vulgaris, *Sole Menth. Br.* 19, 8.

γ. *hircina.* *Leaves* heartshape, ovate, bald; *spikes* pointed, long; *lower whirl* very remote, pedicelled; *taste* virose, ungrateful.

Mentha piperita sylvestris, *Sole Menth. Br.* 53, 24.
Mentha piperita, *Hull Br. Fl.* 127.

12. *Mentha viridis.* *Green mint.*

Spikes interrupted, attenuated; *leaves* sessile, heartshape, lanceolate, pointed, naked; *bracteæ* and *teeth* of the calyx rather hirsute.

Mentha Romana, *Ger. em.* 680, 3.
Mentha spicata viridis, *Lin. S. P. ed.* 1, 576.
Mentha viridis, *Lin. S. P.* 804.
Mentha glabra, *Mill. Dic.*
Spear mint. *Common garden mint.* *Brown mint.* *Maycril mint.*

Bogs; perennial; August.

Stem 3 feet high, upright, bald; *leaves* bald; *spikes* panicled, whirls remote; *bracteæ* twice as long as the flowers; *pedicells* and *calyx* bald; odour aromatic, acrid.—A conserve of the leaves, as also the distilled water and distilled spirit prevent and stop nausea and vomiting: leaves used also as carminatives to season flatulent food; made into poultices, or in fomentations, used to dissolve coagulations of milk in the breasts, milk with which mint leaves are mixed not curdling nearly so soon as pure milk.

β. *angustifolia.* *Leaves* rather hirsute beneath; *teeth* of the calyx fringed, fringes short.

Mentha spicata angustifolia, glabra, folio rugosiore, odore graviore, *Raii Syn.* 233, 1.

γ. *ciliata.* *Leaves* rather hirsute beneath; *teeth* of the calyx fringed; fringes long, very copious.

Mentha spicata angustifolia, glabra, spica latiore, *Dillen in Raii Syn.* 233, 2.

δ. *latifolia.* *Leaves* broad, short, wrinkled; *teeth* of the calyx fringed; fringes short.

Mentha spicata glabra, latiore folio, *Dillen in Raii Syn.* 234, 3.

III. 121. PULEGIUM. Pliny. *Pennyroyal.*

Calyx 5-cut, irregular, not 2-lipped, mouth closed with hairs when in fruit; *corolla* little longer than the calyx, 4-lobed, nearly equal; upper lobe not nicked; *stamens* didynamous, diverging.—*Rhizoma* creeping; herb aromatic; *whirls* pedicelled; *bracteæ* 0.

Pulegium aromaticum. *Scented pennyroyal.*

Leaves reverse ovate, oblong, blunt, rather crenate; *flowers* in whirls; *pedicells* and *calyx* tomentose; *teeth* of the calyx fringed.

Pulegium, *Raii Syn.* 235, 1.
Pulegium regium, *Ger. em.* 671, 1.
Pulegium vulgare, *Park.* 29.
Mentha Pulegium, *Lin. S. P.* 807.
Pennyroyal. Pudding-grass. Puliall royal. Organie.

Inundated places; perennial; September.

Stem prostrate, much branched, downy, creeping; *leaves* petioled, blunt; *whirls* many-flowered; *pedicells* hairy; hairs short, horizontal; *corolla* purple; tube white; *stamens* exserted.—Herb antispasmodic, used in hysterical diseases, in infusion, or as a distilled water: syrup of the juice used in hooping cough.

β. *album.* *Flowers* white.

γ. *erectum.* *Stem* upright; *pedicells* hairy; hairs slightly deflected.

Pulegium mas, *Ger. em.* 671, 2.
Mentha Pulegium β, *Stokes Bot. M. M.* 3, 320.

IV. 122. BUGULA. Dioscorides. *Bugle.*

Calyx 5-cut, irregular, not 2-lipped; *corolla* tubular, upper lip or galea very short, truncated, 2-toothed; lower 3-lobed; middle lobe large, reverse heartshape; *stamens* exserted, ascending; *anthers* all alike, short, 1-celled; *microbasis* reticulated.—*Hairs* short, tranversely parted.

a. *Flowers axillary, spiked; leaves broad; root creeping.*

1. *Bugula reptans.* *Creeping bugle.*

Stolones creeping; *leaves* oval, oblong, baldish; *stems* solitary.

Bugula, *Raii Syn.* 245, 1; *Ger. em.* 631, 1.
Bugula vulgaris, *Park.* 245.
Ajuga reptans, *Lin. S. P.* 785.
Teucrium reptans, *Salisb. Prod.*
Bugula reptans, *Scopoli Carn.*
Brown bugle. Sickle wort. Herb carpenter.

Woods and damp pastures; perennial; April and May.

Flowering stem upright, simple, rather hairy; *leaves* elliptic, blunt, repand; upper leaves sessile; *bracteæ* not in the least cut; *middle lobe* of the corolla cut.

β. hirsuta. *Stolones* short; *herb* hirsute; *stem* roundish.

Dry mountains.

2. *Bugula pyramidalis.* *Pyramidal bugle.*

Stolones 0; *leaves* oval and oblong, villous; root-leaves very large, reverse ovate, crenate; *bracteæ* not cut; *whirls* pyramidically crowded, many-flowered.

Ajuga pyramidalis, *Lin. S. P.* 785.

Scotch mountains; perennial; May and June.

Root tuberous; *stem* single; *root-leaves* many, petioled, blunt, repand; stem-leaves very few, short; *bracteæ* oval, cut, coloured; *spike* close; *corolla* purple.

3. *Bugula alpina.* *Alpine bugle.*

Stolones 0; *stems* many, simple; *leaves* reverse ovate, unequally toothed, rather hairy; stem-leaves nearly as large as the root-leaves; *whirls* rather distant, many-flowered.

Bugula cærulea alpina, *Raii Syn.* 245, 2; *Park.* 525.
Ajuga pyramidalis, *Huds. Fl. Angl.* 248.
Ajuga Genevensis, *Withering Bot. Arr.*
Ajuga alpina, *Lin. Mant.* 80.
Mountain bugle.

Mountains; perennial; June.

Lower bracteæ cut; upper not cut, coloured.

b. *Flowers axillary, solitary; leaves slender, mostly 3-cut or toothed; root annual.* Chamæpitys.

4. *Bugula arvensis.* *Field bugle.*

Stem diffuse; *leaves* 3-cut, edge of the lobes not cut; *flowers* shorter than the leaves.

Chamæpitys vulgaris, *Raii Syn.* 244, 1; *Park.* 283.
Chamæpitys mas, *Ger. em.* 525, 1.
Teucrium Chamæpitys, *Lin. S. P.* 787.
Bugula Chamæpitys, *Scop. Carn* 718.
Ajuga Chamæpitys, *Engl. Bot.* 77.
Teucrium arvense, *Salisb. Prod.* 76.
Ground pine. Herb ivy. Forget me not. Field cypress.

Sandy fields; annual; April and May.

Stem much branched; *leaves* 3-cut to the middle; lobes revolute; lower leaves undivided; *flowers* nearly sessile, yellow spotted with red.—*Herb* bitter, acrimonious, useful in gout, intermitting fevers, and jaundice.

β. tridentata. *Leaves* linear; edge not cut; tip 3-toothed.

V. 123. CHAMÆDRYS. Dioscorides. *Germander.*

Calyx tubular, gibbous at the base, 5-toothed; teeth lanceolate, upper broadest, 2 lowest slender; *corolla* ringent; galea truncated, deeply cut; lobes falcate, connate at the tip; lower lip 3-parted, lateral lobes long, middle lobe concave, very large, slightly 3-lobed; *stamens* 4, didynamous, exserted, ascending; *microbasis*, or cariopsides, smooth.—*Flowers* axillary.

1. *Chamædrys laciniata.* *Jagged-leaf germander.*

Stem decumbent; *leaves* pinnatifid; lobes 3-cut; *flowers* peduncled, in threes.

Chamæpitys fœmina, *Ger. em.* 525, 2.
Teucrium Botrys, *Lin. S. P.*
Chamædrys Botrys, *Mœnch Meth.* 383.
Female ground-pine.

Cultivated places; annual; June to August.

Stem 4-sided, branched; hairs horizontal; *leaves* petioled, many-cut, lobes cut; *flowers* in threes from the base of each leaf; *calyx* much swollen at the base; *corolla* purplish.

2. *Chamædrys officinalis.* *Shop germander.*

Stem rather procumbent, villose; *leaves* wedgeshape, ovate, cut, crenate, hirsute, petioled; *flowers* in threes.

Chamædrys vulgaris seu sativa, *Raii Syn.* 231, 1; *Park.* 104.
Chamædrys major latifolia, *Ger. em.* 656, 1.
Chamædrys minor, *Ger. em.* 656, 2.
Chamædrys, *Park. Parad.* 456.
Teucrium Chamædrys, *Lin. S. P.* 790.
Teucrium veronicæfolium, *Salisb. Prod.* 76.
Chamædrys officinalis, *Mœnch Meth.* 383.
Wall germander. English treacle.

Old walls; perennial; July.

Rhizoma creeping; *stem* ascending, branched, nearly 4-sided; *lower half* of the leaves not cut, growing narrow; *calyx* hairy; teeth downy, edged with white; *corolla* purplish.—Herb diuretic, emmenagogue and diaphoretic; its decoction in wine recommended in gout.

3. *Chamædrys palustris.* *Marsh germander.*

Stem diffuse, downy; *leaves* oblong, sessile, toothed, rather naked; *flowers* peduncled, in pairs.

Scordium, *Raii Syn.* 246, 1; *Ger. em.* 660, 1.
Scordium legitimum, *Park.* 111.
Teucrium Scordium, *Lin. S. P.* 790.
Water germander. Scordium. Garlick germander.

Bogs; perennial; July and August.

Stem procumbent, 4-sided, hairy; *leaves* toothed, serrated; *flowers* in twos or threes, peduncled; *calyx* hairy.

VI. 124. SCORODONIA. Val. Cordus. *Wood-sage.*

Calyx tubular, bellied at the bottom, 2-lipped; upper lip not cut, ovate, upright; lower lip 4-toothed; 2 side teeth short; 2 lower teeth jutting forwards; *galea* truncated, deeply cut; lobes rounded; lip 3-cut, side-lobe oblique spread; middle lobe reverse heartshape; *stamens* 4, didynamous, exserted; *gynobasis* or cariopsides smooth. — *Flowers* racemose, terminal, yellow; *racemes* leafy.

Scorodonia solitaria. *Single-flowered wood-sage.*

Stems upright; *leaves* heartshape, rather downy, toothed, petioled; *racemes* axillary, facing one way.

Scorodonia seu Salvia agrestis, *Raii Syn.* 245, 1; *Ger. em.* 662, 1.
Scorodonia seu scordium alterum quibusdam et salvia agrestis, *Park.* 111.
Teucrium Scorodonia, *Lin. S. P.* 789.
Teucrium salviæfolium, *Salisb. Prod.* 76.
Scorodonia heteromalla, *Mœnch Meth.* 384.
Scorodonia solitaria, *Stokes B. M. M.* 3, 374.
Wood sage. Garlick sage.

Woods and heaths; perennial; July.

Rhizoma creeping; *stem* 4-sided, panicled, racemose; *leaves* wrinkled; *flowers* peduncled, yellow; *stamens* violet.

VII. 125. LAVANDULA. Gesner. *Lavender.*

Calyx tubular, ovate; outside many-ribbed; inside bald; edge not cut or but slightly toothed; periphyllum ovate, projecting; *corolla* tubular, long, bellied above; galea large, narrower than the lip, flat, 2-cut; lip 3-lobed; lobes equal, blunt; *stamens* 4, didynamous, from the side of the tube, convergent, enclosed.—*Stem* herbaceous or shrubby; *flowers* spiked, bracteated.

Lavandula Tragi. *Tragus's lavender.*

Leaves sessile, lanceolate, linear, not cut, edge turned under; *spike* interrupted; *bracteæ* lanceolate.

Lavandula flore cærulea, *Ger. em.* 583, 1.
Lavandula major, sive vulgaris, *Park.* 73.
Lavandula Spica, *Lin. S. P.* 800.
Lavandula Tragi, *Salisb. Prod.* 78.
Lavender spike.

Cultivated shrubby; June and July.

Stem upright; *stem-leaves* scarcely turned under; branch-leaves turned under, airy underneath; hairs stellate; bracteæ brown; *flowers* violet, sweet-scented.—*Spikes* yield much essential oil in distillation, oil very sweet-scented, containing a large proportion of camphire; *flowers* nervine, antispasmodic, cephalic.

VIII. 126. NEPETA. Pliny. *Cat-mint.*

Calyx cylindrical, not 2-lipped, striated, dry, bald on the inside, 5-toothed; teeth unequal, upper tooth broadest; *tube* of the corolla long; mouth spreading; edge reflexed; galea slender, short, 2-cut; lip 3-lobed; side lobes short; middle lobe very large, concave, crenate; *stamens* 4, didynamous, exserted, converging.—*Flowers* verticillate spiked, or terminal panicled; *peduncles* many-flowered, bracteated.

Nepeta mollis. *Soft cat-mint.*

Leaves petioled, heartshape, toothed, serrate; *whirls* pedicelled; *flowers* spiked.

Nepeta major vulgaris, *Raii Syn.* 237, 1; *Park.* 38.
Mentha felina, seu cattaria, *Ger. em.* 682, 1.
Nepeta cattaria, *Lin. S. P.* 796.
Nepeta mollis, *Salisb. Prod.* 78.
Nep.

Edges of chalky fields; perennial; July and August.

Herb very soft, sometimes woolly; *stem* upright; *leaves* wrinkled; *spikes* blunt, many-flowered; *corolla* white, lip spotted with red.—*Odour* aromatic, much liked by cats.

IX. 127. BETONICA. Pliny. *Betony.*

Calyx irregular, not lipped, 5-toothed; teeth unequal, awned; mouth hairy; *corolla* lipped; tube bent at bottom; galea upright, not cut; lip 3-cut; middle lobe deflexed at the sides; *stamens* 4, didynamous, short, not converging.—*Stem* simple; *flowers* terminal, spiked; *true bracteæ* 0.

Betonica officinalis. *Shop betony.*

Leaves heartshape, crenate, rather hairy; *hairs* of the stem adpressed; *calyx* rather bald; *galea* not cut; middle lobe of the lip nicked.

Betonica, *Raii Syn.* 238; *Ger. em.* 714, 1.
Betonica vulgaris flore purpureo, *Park.* 614.
Betonica officinalis, *Lin. S. P.* 810.
Wood betony.

Woods; perennial; July and August.

Stem with rough and stiff bristles; *leaves* blunt, serratures broad; lower leaves petioled; *spikes* leafy; *corolla* purple or white.—Root emetic; herb sternutatory, also smoked as tobacco: formerly in high esteem as cephalic.

X. 128. STACHYS. Dioscorides. *Wound-wort.*

Calyx irregular, not lipped, sometimes closed, 5-toothed; teeth awlshape, irregular, sometimes distorted; *corolla* lipped; tube short, gibbous, prominent; galea arched, nicked; lip 3-lobed, lobes reflexed sideways; *stamens* 4, didynamous, becoming reflexed sideways.—*Flowers* axillary or verticillately spiked; *true bracteæ* 0.

1. *Stachys sylvatica.* *Wood wound-wort.*

Stem solid; *leaves* heartshape, wrinkled, pointed, serrate, petioled; *whirls* 6-flowered.

Galeopsis legitima Dioscoridis, *Raii Syn.* 237, 1; *Park.* 908.
Galeopsis vera, *Ger. em.* 709, 1.
Stachys sylvatica, *Lin. S. P.* 811.
Hedge nettle.

Woods and hedges; perennial; July and August.

Rhizoma rather creeping; *stem* simple; *leaves* dark green; *spike* ovate, interrupted; *calyx* hispid; *corolla* brownish blood-colour; *lip* white, spotted.

β. *minus.* *Leaves* angular.

Galeopsis q. lamium sylvaticum spicatum fœtidum, folio anguloso minus Plukeneti, *Dillen in Raii Syn.* 237, 2.

2. *Stachys ambigua.* *Doubtful woundwort.*

Stem pipey; *leaves* oblong, serrate, petioled; *whirls* 6-flowered.

Stachys ambigua, *Engl. Bot.* 30, 2089.

Fields in north of Scotland; perennial; September.

Rhizoma creeping, white; *leaves* paler than those of s. sylvatica; *corolla* bright red; lip variegated; *teeth* of the calix lanceolate.

3. *Stachys palustris.* *Marsh woundwort.*

Leaves heartshape, linear, lanceolate, rather bald, sessile, acutely serrated; *whirls* 6 to 10-flowered.

Sideritis Anglica strumosa radice, *Raii Syn.* 242, 1; *Park.* 587.
Panax coloni, *Ger. em.* 1005.
Stachys palustris, *Lin. S. P.* 811.
Clowns allheal. Clowns woundwort.

Moist places; perennial; August.

Rhizoma creeping; stolones becoming tuberous; *stem* rough; *bristles* deflexed; *leaves* silky above, woolly beneath; lower leaves slightly petioled; *spikes* dense, long; *corolla* purple, lip variegated.—Herb astringent, used to cure wounds by the first intention, by being bruised and applied to them; also in ointments.

XI. 129. TRIXAGO. Lonicerus. *Trissago.*

Calyx irregular, not lipped, 5-toothed; teeth unequal; mouth nearly naked; *corolla* lipped; tube not so long as the calyx; galea arched, not cut; lip 3-lobed, middle lobe larger, blunt; *stamens* 4, didynamous, becoming diverged sideways.—*Flowers* verticillate, spiked; *true bracteæ* 0.

Trixago arvense. *Field trissago.*

Leaves heartshape, blunt, crenate, rather hirsute; lower leaves petioled; upper leaves sessile.

Sideritis humilis lato obtuso folio, *Raii Syn.* 242, 2; *Ger. em.* 699, 5.
Sideritis hederulæ folio, *Park.* 587.
Stachys arvensis, *Lin. S. P.* 814.
Glechoma marrubiastri, *Villars Delph.*
Trixago cordifolium, *Mœnch Meth.* 398.

Fields in light soils; annual; July and August.

Root fibrous; *stem* weak, branched; *leaves* 3-ribbed at the bottom, broadly crenate; *teeth* of the calyx fringed; *corolla* purplish.

XII. 130. ERIOSTOMUM. Link. *Base-horehound.*

Calyx irregular, not lipped, 5-toothed; teeth unequal, spinose; mouth with long hairs; *corolla* lipped, tube short; galea arched, nicked; lip 3-lobed; middle lobe very large, reverse heartshape; *stamens* 4, diverging.—*Flowers* verticillate, spiked; *true bracteæ* 0.

Eriostomum Germanicum. *German base-horehound.*

Leaves narrow at bottom, silky above, woolly beneath; root leaves ovate; upper leaves acutely crenated.

Stachys Fuchsii, *Raii Syn.* 239, 1; *Ger. em.* 695, 2.
Stachys major Germanica, *Park.* 48.
Stachys Germanica, *Lin. S. P.* 812.
Wild stinking horehound.

Fields and hedges in chalky soils; perennial; July.

Stem woolly, very soft; *leaves* veined; *spikes* leafy; *calyx* very closely villose; *corolla* purplish, very villous on the outside.

XIII. 131. GLECHOMA. Dioscorides. *Ground-ivy.*

Calyx tubular, cylindrical, striated, naked on the inside, 5-cut, rather unequal, not 2-lipped, 3 upper teeth long, 2 lower short; *corolla* tubular, tube twice as long as the calyx, bellied above; galea distant, slender, 2-cut; lip 3-cut, side lobes narrow, middle lobe large, nicked; *an-*

thers 4, bent, cohering in pairs; *ovary* girt with a sarcoma. —*Herb* creeping; *hairs* distinctly articulated; *flowers* axillary, peduncled.

Glechoma hederacea. *Ivy ground-ivy.*

Leaves heartshape or kidneyshape, crenate; *teeth* blunt.

Calamintha humilior, folio rotundiore, *Raii Syn.* 243, 3.
Hedera terrestris, *Ger. em.* 856, 1.
Hedera terrestris vulgaris, *Park.* 677.
Glechoma hederacea, *Lin. S. P.* 807.
Chamæclema hederacea, *Mœnch Meth.* 393.
Alehoof. Tun hoof. Cats foot. Gill go by the ground.

Woods and hedges; perennial; April and May.

Herb downy; *stem* creeping, branches upright, flower-bearing; *leaves* petioled, spreading; *flowers* in whirls 3 or 4 together, blue.—*Herb* astringent, vulnerary, and pectoral, used to fine malt liquors; powder of the leaves used in cough, consumption, and jaundice; juice as an errhine useful in headach.

β. *parvifolia.* *Leaves* small, finely cut.

Calamintha foliis eleganter dissectis, cauliculis erectioribus, brevioribus; foliis minoribus, *Dillen in Raii Syn.* 243, 3.

γ. *grandifolia.* *Leaves* heartshape, kidneyshape, large.

2. *Glechoma hirsuta.* *Hairy ground-ivy.*

Leaves heartshape, toothed; teeth acute; *pedicells* usually 3-flowered; *teeth* of the calyx awlshape; *filaments* bearing the anthers below the tip.

Calamintha q. hedera terrestris montana C. Bauhini, *Dillen in Raii Syn.* 243, 4; *Park.* 677.
Lamium Pannonicum tertium Clusii, *Ger. em.* 704, 6.
Glecoma hederacea β, *Hudson Fl. Angl.* 254.
Glechoma hederacea ε, cordifolia, *Stokes Bot. M. M.* 329.
Glechoma hirsuta, *Persoon Syn.* 121.

Woods and hedges; perennial; April and May.

Stem 3 feet long, rougher and more hairy than the former; *teeth* of the leaves terminated by a white spot; flower large.

XIV. 132. LAMIUM. Pliny. *Dead-nettle.*

Calyx bellshape, irregular, not 2-lipped; apex spreading, inside naked, 5-toothed; 1 upper slender, long; 4 lower nearly equal; *corolla* tubular, long; mouth inflated; edge reflexed; galea distant, slender, arched, not cut; lip 3-lobed; side lobes very short, with 1 or 2 bristlelike teeth; middle lobe reverse-kidneyshape, crenated; *anthers* hirsute. —*Flowers* in whirls, axillary.

1. *Lamium album.* *White dead-nettle.*

Leaves ovate heartshape, pointed, acutely serrate, petioled; *whirls* 20-flowered.

Lamium album, *Raii Syn.* 240, 1; *Ger. em.* 702, 1; *Lin. S. P.* 809.
Lamium vulgare album, seu Archangelicum flore albo, *Park.* 604.
White archangel. Dead nettle.

Ruins and waysides; perennial; May to September.

Rhizoma creeping; *leaves* deeply serrated; *flowers* upright, white, rarely flesh-colour; galea villous; *calyx* bald, with a brown spot; *anthers* black.

2. *Lamium maculatum.* *Spotted dead-nettle.*

Stem hirsute; *leaves* heartshape, wrinkled, pointed, hirsute, broadly serrate; *whirls* 10-flowered.

Lamium montanum Columnæ, *Park.* 605.
Lamium maculatum, *Lin. S. P.* 809.

Banks; perennial; April.

Stem ascending: hairs deflexed; *petioles* long; *root leaves* with a white spot; *flowers* large, purple or white; galea irregularly crenated; *anthers* tawny.

3. *Lamium purpureum.* *Purple dead-nettle.*

Leaves heartshape, blunt, petioled, toothed; teeth blunt and unequal; upper leaves crowded; *whirls* 8 or 10-flowered; *tube* of the corolla bearded on the inside at the bottom; galea not nicked.

Lamium rubrum, *Raii Syn.* 240, 2; *Ger. em.* 703, 3.
Lamium vulgare, folio subrotundo, flore rubro, *Park.* 604.
Lamium purpureum, *Lin. S. P.* 809.
Lamium nudum, *Mœnch Meth.* 393.
Small dead nettle. Red archangel.

Ruins and waste places; annual; May to September.

Stem bald, branched at bottom: *leaves* unequally crenated; *flowers* purple or white; *anthers* red; *calyx* bald; teeth fringed.—This, as well as the l. album, is used as a pot-herb.

β. *integrum.* *Leaves* not cut: *flowers* small.

Lamium rubrum foliis per ambitum nec serratis nec crenatis, flore minore, *Prof. Martyn's MS.*

4. *Lamium incisum.* *Cut-leaved dead-nettle.*

Leaves heartshape, dilated, petioled, acutely and unequally cut; upper leaves crowded; *tube* of the corolla bald on the inside, slenderer than the calyx.

Lamium rubrum minus, foliis profunde incisis, *Raii Syn.* 240, 3.
Lamium purpureum β, *Huds. Fl. Angl.* 255.
Lamium incisum, *Willd. S. P.* 89.
Lamium dissectum, *Withering Bot. Arr. ed.* 3.
Lamium hybridum, *Theuill. Paris.*

Kitchen-gardens; annual; May.

Stem branched at bottom; *leaves* cut, lobes pointed; *flowers* small, purplish.

5. *Lamium amplexicaule.* *Stem-embracing dead-nettle.*

Floral leaves sessile, embracing the stem, blunt, crenate or cut; *tube* of the corolla slender.

Lamium folio caulem ambiente majus et minus, *Raii Syn.* 240, 4.
Alsine Hederula altera, *Ger. em.* 616, 4.
Alsine Hederulæ folio minor, *Park.* 762.
Lamium amplexicaule, *Lin. S. P.* 809.
Henbit. Great henbit.

Sandy fields; annual; February to June.

Lower leaves petioled, heartshape, bluntly and deeply serrated; upper leaves heartshape, sessile, 5-lobed; lobes crenated; *flowers* rose-colour; early flowers very short, barren; later flowers 4 times as long as the calyx, fertile.

XV. 133. GALEOBDOLON. Dioscorides. *Archangel.*

Calyx bellshape, 5-cut; teeth 5, unequal, pointed; 2 lower teeth narrow; *tube* of the corolla longer than the calyx, 2-lipped; galea arched, not cut; lip 3-cut; lobes broad, pointed, middle lobe longest; *anthers* bald.

Galeobdolon luteum. *Yellow archangel.*

Leaves ovate; *involucrum* 4-leaved.

Lamium luteum, *Raii Syn.* 240, 5; *Ger. em.* 702, 2; *Park.* 606.
Galeopsis Galeobdolon, *Lin. S. P.* 810.
Leonorus Galeobdolon, *Scop. Carn.* 705.
Lamium Galeobdolon, *Crant. Austr.* 262.
Pollichia Galeobdolon, *Roth. Germ.* 1, 254.
Galeobdolon Galeopsis, *Curtis Fl. Lond.*
Galeobdolon luteum, *Huds. Fl. Angl.* 258.
Galeobdolon vulgare, *Persoon Syn.* 122.
Cardiaca sylvatica, *Lamarck Fl. Fr.* 384.
Yellow dead-nettle. Weasel snout.

Damp meadows and woods; perennial; May.

Stem erect, simple; hairs deflexed; *leaves* petioled; *whirls* many-flowered; *calyx* bald; teeth hairy; *corolla* yellow; mouth spotted with red.

β. *montanum.* *Upper leaves* lanceolate; *involucrum* 6 or 8-leaved.

γ. *regulare.* *Terminal flower* salvershape, 6-cut.

XVI. 134. GALEOPSIS. Dioscorides. *Hedge-nettle.*

Calyx bellshape, irregular, not lipped, 5-toothed; teeth rather spinose; mouth bald; *corolla* lipped, tube longer than the calyx; galea arched, crenate; lip 3-lobed; middle lobe broadest, with a tooth on each side between that and the lateral lobes; mouth with 2 elevated, hollow, blunt horns on the lower side; *anthers* bald.—*Flowers* whirled, axillary.

a. *Teeth of the calyx triangular, pointed; stem rather bald; internodes of the stem equal.* Ladanum.

1. *Galeopsis angustifolia.* *Narrow-leaved hedge-nettle.*

Stem long, much branched, rather bald; *leaves* linear, lanceolate, narrow at both ends.

Ladanum segetum, *Rivinus Monop. irr.* 24, 1.
Galeopsis angustifolia, *Per. Syn.* 122.
Tetrahitum Ladanum, *Mœnch Meth.* 394.

Cornfields; annual; June to August.

Stem 4-angled; *leaves* beneath pubescent; *flowers* small, reddish; *whirls* girt with 1 or 2 leaves and 4 bracteæ.

β. *regularis.* *Terminal flower* regular, 4 or 5-cleft.

2. *Galeopsis segetum.* *Harvest hedge-nettle.*

Leaves lanceolate, scarcely cut; *whirls* distant; *calyx* downy.

Galeopsis Ladanum, *Lamarck Enc. Meth.* 2, 600.

Fields; annual; June to August.

3. *Galeopsis parviflora.* *Small-flowered hedge-nettle.*

Leaves ovate, blunt, equally serrated, ribbed, rather bald, petioled; *calyx* hirsute, rather shorter than the tube of the corolla.

Galeopsis Ladanum, *Lin. S. P.* 810.
Galeopsis parviflora, *Lamarck Enc. Meth.* 600.
Galeopsis Ladanum 2, *With. Bot. Arr.* 652.
Galeopsis intermedia, *Villars Delph.* 2, 387.
Galeopsis latifolia, *Hoff. Germ.* 418.

Fields; annual; August and September.

Stem mostly simple; *leaves* spreading, ovate; petioles short, serratures large; *flowers* in rather distant whirls; *corolla* purple and white.

4. *Galeopsis ochroleuca.* *Yellowish hedge-nettle.*

Leaves ovate, lanceolate, serrate, petioled, villose; *tube* of the corolla very long; *galea* crenately incised.

Sideritis arvensis, latifolia hirsuta lutea, *Raii Syn.* 242, 3.
Galeopsis villosa, *Huds. Fl. Angl.* 256.
Betonica hirta, *Huds. Fl. Angl. ed.* 1, 220; not of Linnæus.
Galeopsis grandiflora, *Gmelin Syst. Veg.* 905.
Galeopsis ochroleuca, *Lamarck Enc. Meth.* 2, 600.
Galeopsis dubia, *Leers Herb.* 450.
Galeopsis prostrata, *Villars Delph.* 388.
Tetrahit longiflorum, *Mœnch Meth.* 395.
Yellow iron-wort. Downy hemp-nettle.

Sandy fields; annual; July and August.

Leaves equally and regularly serrated; *calyx* villous; *tube* of the corolla 3 times as long as the calyx, yellow; palate fulvous; *anthers* rather villous behind.

b. *Teeth of the calyx awlshape, distant, spinous, hispid; internodes of the stem thickened above.* Tetrahit.

5. *Galeopsis nodosum.* *Knotted hedge-nettle.*

Stem hispid; internodes thickened above; *leaves* ovate, serrate; *upper whirls* contiguous; *tube* of the corolla twice as long as the calyx; galea rather straight.

Lamium cannabino folio vulgare, *Raii Syn.* 240, 7.
Cannabis spuria, *Ger. em.* 709; *Park.* 599.
Galeopsis Tetrahit, *Lin. S. P.* 810.
Tetrahitum nodosum, *Mœnch Meth.* 395.
Galeopsis urticæfolia, *Salisb. Prod.* 81.
Common hemp-nettle. Wild hemp. Bastard hemp.

Fields; annual; July and August.

Stem every where hispid; hairs turned back; *leaves* pointed, hispid on both sides; *tube* of the corolla white, galea convex, purple; lip white, or purple and white.

β. *regularis. Terminal flower* regular, 4-cut; *stamens* equal.

6. *Galeopsis versicolor.* *Changeable hedge-nettle.*

Stem hispid; internodes thickened above; *leaves* broad ovate, serrate; *whirls* contiguous; *tube* of the corolla 3 times as long as the calyx; galea bellied.

Lamium cannabino folio, flore amplo luteo, labio purpureo, *Raii Syn.* 241, 9.
Galeopsis Tetrahit β, *Lin. S. P.* 810.
Galeopsis cannabina, *With. Bot. Arr.* 529.
Galeopsis versicolor, *Curtis Fl. Lond.*
Large-flowered hemp-nettle. Bee nettle.

Sandy fields; annual; July and August.

Leaves pale; *corolla* yellow; lip with yellow lines, and a central violet spot.

XVII. 135. CARDIACA. Gesner. *Mother-wort.*

Calyx bellshaped, 5-sided, 5-toothed, irregular, not lipped: mouth naked; teeth unequal, spinose, expanded, 2 lower longest; *corolla* lipped, tube as long as the calyx; galea upright, concave, not nicked; outside very villous; lip turned back, 3-lobed, lobes pointed, nearly equal; *stamens* 4, didynamous; filaments villous; *anthers* speckled with shining dots; *ovary* tomentose at the tip, margined.—*Leaves* cut; *flowers* in whirls, axillary.

Cardiaca vulgaris. *Common mother-wort.*

Leaves petioled; lower leaves wedgeshape, ovate, 3-lobed, toothed; upper leaves lanceolate, undivided.

Cardiaca, *Raii Syn.* 239, 1; *Park* 41, 42; *Ger.* 705, 1.
Leonurus Cardiaca, *Lin. S. P.* 817.
Cardiaca trilobata, *Lamarck Fl. Fr.* 383.
Stachys triloba, *Stokes Bot. M. M.* 339.
Cardiaca vulgaris, *Mœnch Meth.* 401.
Leonurus ruderalis, *Salisb. Prod.* 84.

Chalk fields; perennial; July and August.

Stem downy; villi bent back; *leaves* spreading, linear tomentose, veiny; *whirls* many-flowered; *corolla* white and woolly on the outside; red and variegated on the inside; *anthers* spotted with white.—Antispasmodic, the decoction used in palpitation of the heart, hysteria; and also given to cattle against coughs and fever.

XVIII. 136. BALLOTE. Dioscor. *Bastard-horehound.*

Calyx bellshape, 5-sided, 10-ribbed, 5-toothed, regular; teeth equal; *corolla* 2-lipped; galea concave, crenated; lip 3-lobed; side lobes roundish, middle lobe large, heartshape, cut; *seeds* triangular.—*Flowers* axillary; *whirls* peduncled, many-flowered.

Ballote fœtida. *Stinking bastard-hellebore.*

Leaves rather heartshape, ovate, crenate, hirsute; *calyx* veined, enlarged above, rather truncated; teeth ovate, mucronated, spreading.

Ballote, *Raii Syn.* 244, 1.
Marrubium nigrum, *Ger. em.* 701, 1.
Marrubium nigrum fœtidum Ballote dictum, *Park.* 1230.
Ballota nigra, *Lin. S. P. ed.* 1, 582.
Mentha aquatica, *Fl. Dan.* 673.
Ballota fœtida, *De Cand. Fl. Fr.* 2576.
Ballota sordida, *Salisb. Prod.* 83.
Black horehound. Stinking horehound.

Hedges and ruins; perennial; July and August.

Stem branched; hairs recurved; *leaves* petioled; *whirls* bracteated; *bracteæ* bristlelike, fringed, shorter than the calyx; *calyx* funnelshape; teeth very short, awned; *corolla* purple; galea yellow; *odour* acrid, pungent.—Decoction of the herb useful in hypochondriacal and hysterical diseases.

XIX. 137. MARRUBIUM. Pliny. *Horehound.*

Calyx hypocrateriform, ridged, 10-streaked, regular, 10-toothed; 5 alternate teeth smaller; *corolla* lipped; tube as long as the calyx; galea linear, straight, 2-cut; lip 3-cut; middle lobe reverse heartshape.—*Flowers* in whirls, axillary; *whirls* sessile, many-flowered, bracteated.

Marrubium vulgare. *Common horehound.*

Stem upright; *leaves* rather round, ovate, toothed, wrinkled, veined; *teeth* of the calyx bristlelike, hooked.

Marrubium album, *Raii Syn.* 239, 1; *Ger. em.* 693, 1; *Rivinus Mon.* 66.
Marrubium album vulgare, *Park.* 44.
Marrubium vulgare, *Lin. S. P.* 816.
Marrubium uncinatum, *Stokes Bot. M. M.* 355.
White horehound.

Ruins and waysides; perennial; July.

Stem woolly; *leaves* petioled, white, woolly beneath; *whirls* very hairy; *bracteæ* bristlelike; *corolla* white.

XX. 138. ORIGANUM. Theophrastus. *Organy.*

Calyx cylindrical, 5-toothed; teeth unequal; mouth closed with hairs; *corolla* lipped; tube compressed; galea upright, nicked: lip 3-cut, nearly equal: *seed* roundish.—*Flowers* densely spiked; *bracteæ* ovate, imbricate, 1-flowered; *spikes* many, terminal or axillary.

Origanum vulgare. *Common organy.*

Leaves ovate; *spike* roundish, panicled; *panicles* conglomerate; *bracteæ* ovate, coloured, as long as the calyx.

Origanum vulgare spontaneum, *Raii Syn.* 236, 1.
Origanum Anglicum, *Ger. em.* 666, 4.
Origanum, *Rivinus Mon.* 60.
Majorana sylvestris, *Park.* 12.
Origanum vulgare, *Lin. S. P.* 821.
Origanum floridum, *Salisb. Prod.* 85.
English wild marjoram. Grove marjoram.

Chalk-fields and hedges; perennial; July and August.

Stem hirsute: hairs turned back; *leaves* ovate, slightly and rarely serrated; *spikes* crowded, ovate; *bracteæ* deep

brownish purple; *corolla* purplish.—Plant warm, aromatic; dried leaves make a good tea; essential oil very acrid, used as a caustic to rotten teeth and horses: tops dye purple.

β. rufescens. *Leaves* ovate, lanceolate; *spikes* topshape; *bracteæ* dull purplish brown.

Origanum Onites, *Raii Syn.* 236, 2, not of Linnæus.
Marjorana major Anglica, *Ger. em.* 664, 2.
Majorana latifolia, sive major Anglica, *Park.* 12.
Pot marjoram. *Winter marjoram.*

Cultivated for a potherb.

XXI. 139. MAJORANA. Brunsfel. *Marjoram.*

Calyx 2-lipped; mouth oblique, when fruitbearing naked; upper lip large; lower lip 2-lobed; *corolla* lipped; *tube* compressed; *galea* upright, nicked; *lip* 3-cut; *lobes* nearly equal; *seeds* roundish.—*Flowers* in dense spikes; *bracteæ* ovate, imbricate, 1-flowered; *spikes* 4-sided, terminal or axillary.

1. *Majorana tenuifolia.* *Fine-leaved marjoram.*

Stem undershrubby; *leaves* petioled, elliptical, slightly serrated, blunt, tomentose; *spikes* roundish, many, glomerate, peduncled; *bracteæ* pointed.

Marjorana tenuifolia, *Ger. em.* 664, 3.
Origanum Majorana *β*, *Lin. S. P.* 825.
Origanum majoranoides, *Willd. S. P.* 3, 137.
Majorana ovatifolia, *Stokes Bot. M. M.* 352.
Marjoram gentle.

Cultivated for an aromatic pot-herb; peren.; June, July.

2. *Majorana vulgaris.* *Common marjoram.*

Root annual; *stem* herbaceous; *leaves* petioled, elliptical, blunt, nearly bald, edge not nicked; *spikes* roundish, in threes, compact, peduncled.

Marjorana major, *Ger. em.* 664, 1.
Majorana vulgaris, *Park.* 33.
Origanum Majorana, *Lin. S. P.* 825.
Majorana ovatifolia, *Stokes Bot. M. M.* 350.
Origanum odorum, *Salisb. Prod.* 85.
Great sweet marjoram. *Fine marjoram.*

Cultivated for an aromatic pot-herb; peren.; June, July.

Stem upright, downy; hairs drooping; *branches* few at the bottom; upper braches spreading, flower-bearing; *bracteæ* ovate, longer than the calyx.

XXII. 140. THYMUS. Theophrastus. *Thyme.*

Calyx bellshape, or ovate, 2-lipped; 3 upper lobes broad, recurved; 2 lower lobes awlshape, bent in, fringed; mouth closed with hairs; *corolla* short, lipped: galea nicked; lip 3-lobed; side lobes ovate; middle lobe oblong, broad, entire.—*Stem* undershrubby; *leaves* small; *flowers* glomerate, axillary or terminal; *plant* odoriferous.

1. *Thymus campestris.* *Field thyme.*

Stem lying down; *leaves* flat, blunt, fringed at bottom; *flowers* capitate.

Serpyllum vulgare, *Raii Syn.* 230, 1; *Ger. em.* 570, 1.
Serpyllum minus vulgare, *Park.* 8.
Serpyllum flore minore, *Rivinus Mon.* 42.
Thymus Serpyllum, *Lin. S. P.* 825.
Thymus campestris, *Salisb. Prod.* 85.
Wild thyme. Mother of thyme. Pulial mountain. Running thyme. Creeping thyme.

Dry sandy heaths, and cultivated; peren.; July, August.

Stem branched; *leaves* petioled, edge not nicked; *heads* leafy; *flowers* pedicelled; *corolla* purplish; galea upright. —Aromatic, used as a pot-herb in soups.

β. *albus.* *Flowers* white.

γ. *grandiflorus.* *Flowers* large.

Serpyllum vulgare flore amplo, *Raii Syn.* 230, 2.

δ. *citratus.* *Leaves* yellow-green; *odour* like that of lemon-peel.

Serpyllum citratum, *Raii Syn.* 231, 4; *Ger. em.* 571, 7.
Serpyllum Pannonicum Clusii, *Park.* 8.
Lemon thyme.

2. *Thymus lanuginosus.* *Woolly thyme.*

Stem creeping, hirsute; *leaves* ovate, obtuse, villous; *flowers* in heads.

Serpyllum vulgare hirsutum, *Raii Syn.* 231, 6.
Thymus Serpyllum, *Lin. S. P.* 825; a variety.
Thymus lanuginosus, *Pers. Syn.* 133.
Serpyllum montanum hirsutum, *Rivinus Mon.* 421.
Hoary wild thyme.

Sandy heaths; perennial; July and August.

Stem undershrubby; *leaves* roundish, every where hirsute; *corolla* purple. — Infusion relieves headach after drinking.

β. *minor.* *Stem* creeping, small; *plant* scentless.

Serpyllum hirsutum minus repens, inodorum, *Raii Syn.* 231, 8.

γ. *pallidiflorus.* *Stem* shrubby; *flowers* pale red.

Serpyllum villosum fructicosus, floribus dilute rubentibus, *Raii Syn.* 231, 7.

3. *Thymus angustifolius.* *Narrow-leaved thyme.*

Stem lying down; *leaves* wedgeshape, linear, fringed at bottom; *flowers* capitate.

Serpyllum angustifolium glabrum, *Dillen in Raii Syn.* 231, 5.
Thymus Serpillum, *Lin. S. P.* 825; a variety.
Thymus Serpillum, *Woodville Med. Bot.* 110.
Thymus angustifolius, *Pers. Syn.* 130.

Dry sandy places and rocks; perennial; July and Aug.

4. *Thymus vulgaris.* *Common thyme.*

Stem upright, undershrubby; *leaves* ovate or lanceolate, turned over at the edge; *flowers* spiked, in whirls.

Thymum durius, *Ger. em.* 573, 1; *Park.* 7.
Thymus vulgaris, *Lin. S. P.* 825.
Thymus collinus, *Salisb. Prod.* 86.
Hard thyme. Common garden thyme.

Cultivated as an aromatic pot-herb; peren.; July, Aug.

XXIII. 141. ACYNOS. Dioscorides. *Basil-thyme.*

Calyx furrowed, hairy, hispid; gibbous at bottom, mouth closed with hairs; limb 2-lipped; upper lip 3-toothed; lower lip 2-bristled; *tube* of the corolla short; mouth rather inflated; galea upright, nicked; lip 3-parted, spreading, middle lobe concave, nicked.—*Flowers* in whirls, axillary.

Acynos vulgaris. *Common basil-thyme.*

Stem ascending, branched at bottom; *leaves* ovate, acute, serrate at bottom; *whirls* 6-flowered.

Acinos multis, *Raii Syn.* 238, 1.
Ocymum sylvestre, *Ger. em.* 675, 1.
Clinopodium minus, sive vulgare, *Park.* 21.
Thymus Acinos, *Lin. S. P.* 826.
Acinos, *Rivinus Mon.* 43.
Acinos thymoides, *Mœnch Meth.* 401.
Acynos vulgaris, *Pers. Syn.* 131.
Thymus gibbosus, *Stokes Bot. M. M.* 360.
Calamintha arvensis, *Lamarck Fl. Fr.* 391.
Thymus concinnus, *Salisb. Prod.* 86.
Small wild basil.

Sandy and chalky fields; annual; July and August.

Stem villous; *leaves* ovate, rather turned over, rough, not dotted; *peduncles* 1-flowered: *corolla* light violet, coloured; lip white and black.

XXIV. 142. CALAMINTHA. Dioscorides. *Calamint.*

Calyx streaked, dry, flattish above; mouth closed with hairs; limb 2-lipped; upper lip even, 3-toothed; lower lip 2-cut; *corolla* lipped; mouth rather inflated; galea nicked; lip 3-parted; middle lobe slightly nicked or crenulated; *stamens* 4, didynamous.—*Flowers* in whirls, axillary; *whirls* peduncled; *peduncles* forked.

1. *Calamintha vulgaris.* *Common calamint.*

Stem weak, hirsute; *leaves* ovate, blunt, serrate, hirsute, punctured; *peduncles* axillary, many-flowered, forked, corymbose; *lower lobes* of the calyx villous, twice as long as the upper lobes.

Calamintha vulgaris, *Raii Syn.* 243, 1; *Park.* 36.
Calamintha vulgaris officinarum, *Ger. em.* 687.
Calamentha, *Rivinus Mon.* 46.
Melissa Calamintha, *Lin. S. P.* 827.
Thymus Calamintha, *Scop. Carn.* 733.
Calamintha montana, *Lamarck Fl. Fr.* 391.
Thymus Calamentha, *Withering Bot. Arr.* 664.
Calamintha officinalis, *Mœnch. Meth.* 409.

Roads and waysides; perennial; July and August.

Stem upright: *leaves* petioled, veined, acutely serrated, pale beneath; *hairs* at the mouth of the calyx enclosed; *corolla* twice as long as the calyx, light violet; galea arched; *odour* aromatic, pleasant.

2. *Calamintha trichotoma.* *Three-forked calamint.*

Stem ascending, rather hirsute; *leaves* ovate, blunt, slightly serrate, rather bald; *peduncles* axillary, many-flowered, forked, corymbose; *teeth* of the calyx nearly equal.

Calamintha odore pulegii, *Raii Syn.* 243, 2; *Ger. em.* 687, 4.
Calamintha minor incana, *Park.* 37.
Calamintha folio incano, *Rivinus Mon.* 47.
Melissa Nepeta, *Lin. S. P.* 828.
Thymus Nepeta, *Smith Fl. Brit.* 612.
Calamintha parviflora, *Lamarck Fl. Fr.* 396.
Calamintha trichotoma, *Mœnch. Meth.* 409.
Field calamint.

Hedges and waysides; perennial; August.

Stem rather woody; *leaves* broadly and bluntly serrated; 2 *upper teeth* of the calyx upright or recurved; hairs at the mouth prominent, white.

XXV. 143. SATUREJA. Pliny. *Savory.*

Calyx bellshape, upright, not lipped, 10-ribbed; mouth bearded, 5-toothed; teeth rather unequal; *tube* of the corolla as long as the calyx; galea erect, 2-cut; lip 3-cut; lobes all nearly equal; *stamens* 4, didynamous, distant.— *Stem* woody; *leaves* punctured; *flowers* in whirls, axillary.

1. *Satureja hortensis.* *Garden savory.*

Stem brachiate, fastigiate; *leaves* linear, lanceolate, rather blunt, dotted, edge not cut; *peduncles* axillary, nearly corymbose.

Satureja hortensis, *Ger. em.* 575, 1; *Lin. S. P.* 795.
Satureja brachiata, *Stokes Bot. M. M.* 300.
Winter savory.

Cultivated for an aromatic potherb; peren.; July, Aug.

2. *Satureja montana.* *Mountain savory.*

Leaves linear, lanceolate, mucronate, dotted, edge not in the least cut; *peduncles* axillary, cymose, nearly facing one way; *teeth* of the calyx pointed.

Satureja hortensis æstiva, *Ger. em.* 575, 2.
Satureja montana, *Lin. S. P.* 794.
Satureja mucronifolia, *Stokes Bot. M. M.* 300.
Summer savory.

Sussex, also cultivated for an aromatic potherb; annual; June.

Leaves keeled, fringed at bottom; *racemes* terminal, leafy; *corolla* rose-coloured.

XXVI. 144. CLINOPODIUM. Dioscorides. *Wild-basil.*

Calyx tubular or ribbed, downy, lipped; upper lip 3-cut, lower lip 2-parted, awlshape, smooth, naked; *tube* of the corolla short; mouth enlarged; galea upright, nicked; lip 3-lobed, lateral lobes roundish; middle lobe nicked.— *Flowers* in whirls, axillary; *whirls* involucrated; *bracteæ* many, bristlelike.

Clinopodium vulgare. *Common wild-basil.*

Stem mostly simple; *leaves* petioled, ovate, blunt, remote, slightly toothed, hairy; *bracteæ* bristlelike.

Clinopodium origano simile, *Raii Syn.* 239, 1.
Acynos, *Ger. em.* 675, 2.
Acinos sive clinopodium majus, *Park.* 22.
Clinopodium, *Rivinus Mon.* 43.
Clinopodium vulgare, *Lin. S. P.* 821.
Melissa glomerata, *Stokes Bot. M. M.* 366.
Stone basil.

Fields and hedges; perennial; August.

Stem fulvous, hairy; *whirls* terminal and axillary, many-flowered, peduncled; *peduncles* branched.—Aromatic.

XXVII. 145. MELISSA. Brunsfels. *Bawm.*

Calyx tubular, rather naked or slightly hairy, spreading at top, mouth 2-lipped; upper lip flat, 3-toothed; lower 2-lobed; *galea* arched, half 2-cut; lip long, 3-parted; middle lobe largest, ovate; *stamens* 4, didynamous.—*Flowers* in whirls, axillary.

Melissa officinalis. *Shop bawm.*

Stem much branched; *leaves* ovate, acute, serrate; *whirls* halved, nearly sessile; *bracteæ* oblong, pedicelled.

Melissa, *Ger. em.* 689, 1.
Melissa vulgaris, *Park.* 40.
Melissa officinalis, *Lin. S. P.* 827.
Balm.

Cultivated; perennial; July.

Leaves rather bald; *flowers* reddish.—*Plant* aromatic; infusion used in cephalic, cardiac, uterine, and stomachic affections, as also in stinking breath.

XXVIII. 146. MELITTIS. Pliny. *Bastard-bawm.*

Calyx tubular, larger than the tube of the corolla, mouth naked, unequally 2 lipped; upper lip not cut, sometimes 2-cut; lower lip 2-cut; *corolla* lipped, tube cylindrical; *galea* arched, cut; *lip* 3-lobed, middle lobe reverse heart-shape, large, crenate; *anthers* bent, cohering by pairs.—*Flowers* axillary, 6 in a whirl, not bracteated.

Melittis grandiflora. *Large-flowered bastard-bawm.*

Stem simple; *leaves* petioled, ovate, serrate, hairy; *whirls* 6 to 8-flowered; *peduncles* 1-flowered.

Melissa Fuchsii, *Raii Syn.* 242, 1.
Melissa Fuchsii flore purpureo, *Ger. em.* 690, 2.
Melissophyllum Fuchsii, *Park.* 41.
Melissophyllum, *Rivinus Mon.* 21, 2.
Melittis Melissophyllum, *Lin. S. P.* 832.

Woods and hedges; perennial; May and June.

Root fibrous; *stem* hairy; *flowers* axillary; *calyx* coloured, 3-lobed; upper lobe not cut, pointed, nicked or deeply 2-cut, even on the same plant; *corolla* downy, flesh-colour; lip deep purple with a white border.

β. *alba.* *Flowers* yellowish white; middle of the lip violet, edge white.

Melissa Fuchsii flore albo, *Ger. em.* 690, 3.
Melissophyllum, *Rivinus Mon.* 21, 1.
Melittis Melissophyllum, *Curtis Fl. Lond.*
Melittis grandiflora, *Engl. Bot.* 636.

XXIX. 147. SALVIA. Pliny. *Sage.*

Calyx bellshape, streaked; mouth naked, 2-lipped; upper lip 3-toothed; middle tooth broad, short; lower lip 2-cut; *corolla* ringent; galea arched, concave, nicked; lower lip 3-cut; side lobes slender; middle lobe rounded; *stamens* 2; *filaments* with a traverse pedicell in the middle.—*Flowers* in whirls, spiked.

Salvia officinalis. *Shop sage.*

Leaves lanceolate, ovate, crenulate, reticulated; *racemes* in whirls; *calyx* longer than the bracteæ; *teeth* pointed.

Salvia major, *Ger. em.* 764, 1.
Salvia major vulgaris, *Park.* 49.
Salvia officinalis, *Lin. S. P.* 34.
Great sage.

Cultivated; perennial; May and June.

Stem villous; *leaves* unequal at bottom, whitish-green; *calyx* slightly woolly; *corolla* purple.—Aromatic, used in cookery, also diuretic; infusion drank as an emmenagogue, and useful in palsy, giddiness, trembling, and other nervous affections.

β. *rubra.* *Leaves* reddish.

Red sage.

γ. *absinthites.* *Leaves* bitter, like wormwood.

Salvia absinthites, *Ger. em.* 764, 7.
Salvia minor altera, flore rubente, *Park.* 51.
Wormwood sage.

δ. *auriculata.* *Leaves* eared at the base.

XXX. 148. SCLAREA. Matthioli. *Clary.*

Calyx bellshape; mouth naked, 2-lipped; upper lip 3-toothed; lower lip 2-cut; *corolla* lipped; galea arched, compressed, nicked; lower lip 3-lobed; side lobes slender; middle lobe rounded; *stamens* 2; *filaments* with a traverse pedicell at bottom. — *Flowers* axillary, in whirls, often spiked.

Sclarea pratensis. *Meadow clary.*

Leaves heartshape, oblong, crenate; uppermost pairs of leaves embracing the stem; *whirls* rather naked; *bracteæ* pointed, coloured, longer than the calyx; *teeth* of the upper lip of the calyx connivent; *galea* glutinous.

Sclarea pratensis foliis serratis, flore cæruleo, *Dillen in Raii Syn.* 237, 1.
Horminum sylvestre Fuchsii, *Ger. em.* 769, 3.
Horminum sylvestre vulgare, *Park.* 55.
Horminum pratense, *Rivinus Mon.* 36.
Salvia pratensis, *Lin. S. P.* 35.
Sclarea pratensis, *Mœnch Meth.* 376.
Clear-eye.

Dry fields and hedges on chalk; perennial; July.

Leaves wrinkled; lower leaves petioled; *whirls* 6-flowered; *calyx* hirsute; hairs with heads, glandular; *corolla* violet-colour, 4 times as long as the calyx.—*Seeds* in water acquire a thick mucilage round them, used to put into the eyes to get out substances which have flown into them.

XXXI. 149. HORMINUM. Hippocrates. *Oculus-Christi.*

Calyx bellshape; mouth naked, 2-lipped; upper lip 3-toothed; lower lip 2-cut; *galea* arched, compressed, nicked; lower lip 3-lobed; side lobes slender; middle lobe rounded; *stamens* 2; *filaments* with a traverse pedicell at the bottom.—*Flowers* axillary, in whirls, spiked.

Horminum sylvestre. *Wild Oculus-Christi.*

Leaves heartshape, oblong, sinuately and doubly crenated, wrinkled; *teeth* on the upper lip of the calyx connivent; *corolla* much slenderer and a little longer than the calyx.

Horminum sylvestre lavendulæ flore, *Raii Syn.* 237, 1; *Park.* 57.
Horminum sylvestre, *Ger. em.* 771, 1.
Salvia Verbenaca, *Lin. S. P.* 35.
Horminum coloratum, *Mœnch Meth.* 376.
Wild clary.

Fields and pastures on chalk; peren.; June to October.

Stem ascending; *leaves* rather bald; *bracteæ* longer than the calyx; *calyx* hirsute; hairs with heads, glandular; *teeth* inflected; *corolla* blue, not twice as long as the calyx; tube constricted; *seeds* round, black, smooth.—*Seeds* in water acquire a mucilaginous envelope, so that they are used, like those of meadow clary, to extract things from the eyes.

XXXII. 150. BRUNELLA. Brunsfels. *Selfheal.*

Calyx tubular; mouth naked, lipped; upper lip flat, truncated, 3-cut; lower lip shorter, 2-cut; *galea* concave, either nicked or not; lip 3-lobed; middle lobe largest, nicked; *stamens* 4, didynamous; *filaments* forked or two-toothed; one branch antherbearing, the other naked; *stigma* 2-cut.—*Stem* simple; *flowers* spiked, terminal, in dense whirls; *bracteæ* large, fringed or torn.

Brunella vulgaris. *Common selfheal.*

Stem ascending; *leaves* petioled, oblong, ovate, toothed at the bottom; *upper lip* of the calyx truncated, 3-toothed, ending in short bristles; middle tooth as broad again as the others.

Prunella, *Raii Syn.* 238, 1; *Ger. em.* 632, 1; *Rivinus Mon.* 29.
Prunella vulgaris, *Park.* 1680; *Lin. S. P.* 837.
Brunella vulgaris, *Stokes Bot. M. M.* 377; *Mœnch Meth.* 414.
Prunel. Carpenters herb. Sickle wort. Hook-heal.

Fields and pastures; perennial; July and August.

Stem much branched, hairy; hairs upright; *leaves* hairy, slightly toothed; *spike* solitary, blunt; *bracteæ* heartshape, pointed, fringed; *upper lip* of calyx dilated; lower lip deeply 2-cut; *corolla* violet colour.—*Herb* used both internally in decoction, and externally in the cure of fresh wounds; also in the inflammatory sore throat.

XXXIII. 151. SCUTELLARIA. Cortusus. *Skullcap.*

Calyx tubular, short; mouth naked, lipped; lips not cut, pointed; paraphyllum concave, incumbent on the upper lip; *tube* of the corolla longer than the calyx, bent at bottom; upper lip compressed, arched; mouth 2-lobed; lower broadest, nicked; *seeds* closed up in the calyx by the enlarged paraphyllum.—*Flowers* solitary, axillary; *bracteæ* 2 to each peduncle.

1. *Scutellaria galericulata.* *Hooded skullcap.*

Leaves heartshape, lanceolate, distantly crenated; *flowers* solitary, axillary.

Cassida palustris vulgatior, flore cæruleo, *Raii Syn.* 244, 1.
Lysimachia galericulata, *Ger. em.* 477, 10.
Lysimachia cærulea, sive latifolia major, *Park.* 221.
Scutellaria, *Rivinus Mon.* 77.
Scutellaria galericulata, *Lin. S. P.* 835.
Cassida galericulata, *Mœnch Meth.* 413.
Hooded loosestrife. Blue skullcap.

Watery places; perennial; July and August.

Stem 4-angular, nearly bald, branched in the middle; *leaves* wrinkled; petioles very short; *flowers* on short pedicells, solitary or on opposite sides of the stem, looking one way; *bracteæ* 2 to each flower; *calyx* hairy; *corolla* blue.

2. *Scutellaria minor.* *Small skullcap.*

Leaves heartshape, ovate, edge scarcely nicked; *flowers* axillary, solitary.

Cassida palustris minima, flore purpurascente, *Raii Syn.* 244, 2.
Gratiola latifolia, *Ger. em.* 581.
Gratiola latifolia, seu nostras minor, *Park.* 221.
Scutellaria minor, *Lin. S. P.* 835.
Broad-leaved hedge hyssop. Small hooded mint.

Damp heaths; perennial; August.

Stem branchy at bottom; *leaves* rarely toothed at the bottom, or hastate; *tube* of the corolla red; lip white, spotted with red.

Fam. XVI. 33. PYRENACEÆ. Ventenat. *Vitices*, Jussieu. *Verbenaceæ*, Persoon. *Labiatis affines*, Link.

Calyx 1-leaved, tubular, persisting; *corolla* tubular, mostly irregular, rarely lipped, deciduous; *stamens* 4, didynamous, rarely equal, or 2; *ovary* 1, free, 2 or 4-celled; *ovules* upright, solitary; *style* 1, placed on the ovary; *stigma* simple or 2-lobed; *cariopsides* 2 or 4, enclosed in an utriculus, 1-seeded; *utriculus* vanishing and membranaceous, or persistent and fleshy; *seed* upright; perisperm 0; corculum placed lengthways; radicle below.—*Stem* herbaceous or shrubby; *leaves* not cut or divided, opposite; *flowers* in heads, spiked or corymbose.

152. VERBENA. Pliny. *Vervain.*

Calyx 5-toothed; upper tooth smallest and shortest; *corolla* funnelshape; tube bent; mouth contracted; limb 5-lobed, unequal; *stamens* 4, didynamous, all fertile; *utriculus* membranaceous, vanishing; *cariopsides* 4, in the utriculus.—*Leaves* laciniate or not cut; *flowers* spiked; *bractea* one to each flower.

Verbena officinalis. *Shop vervain.*

Stem upright, mostly solitary; *leaves* inciso-pinnatifid; *spike* threadlike, panicled.

Verbena vulgaris, *Raii Syn.* 236, 1.
Verbena communis, *Ger. em.* 718, 1.
Verbena mas, sive recta et vulgaris, *Park.* 678.
Verbena officinalis, *Lin. S. P.* 29.
Holy herb. Juno's tears. Mercury's moist blood. Pigeon's grease. Columbine.

Fields, ruins, and waysides; perennial, Ray and Curtis; biennial, Hudson and Aiton; annual, Boerhaave and Linnæus; July.

Stem upright, bent at bottom; *leaves* rough; lower leaves deeply lobed; upper leaves 3-cut or simple; *spikes* many-flowered; *bracteæ* ovate, acute, shorter than the calyx; *corolla* small, purple; mouth fringed; galea 2-cut; lip 3-lobed, nearly equal.—*Herb* cephalic, slightly astringent; decoction used in headach, coughs, jaundice, and other obstructions of the viscera; and as a gargle in sore throat.

Fam. XVII. 34. OLEINÆ. Link. *Jasminearum pars*, Jussieu.

Flowers hermaphrodite; *calyx* 1-leafed, free, persistent, divided; *corolla* hypogynous, 1-petaled, 4-cut; æstivation valvate; *stamens* 2, alternating with the lobes of the corolla; *anthers* 2-celled, cells opening lengthways; *ovary* 1, simple, base not glandular, 2-celled; ovules pendulous, 2 in each cell, side by side; *style* 1; *stigma* 2-cut; *fruit* a berry or drupe, 1 or 2-celled, 1 or 2-seeded by abortion; *seeds* pendulous; spermodermis simple; perisperm fleshy; corculum straight, central, nearly as long as the perisperm; cotyledons leaflike; radicle above, plumule inconspicuous. —*Leaves* opposite, simple; *flowers* racemose or panicled, terminal; *peduncles* opposite, bracteated.

153. LIGUSTRUM. Pliny. *Privet.*

Calyx very small, 4-toothed; *tube* of the corolla short; limb 4-lobed, spreading; *stamens* 2; *berry* 1 or 2-celled, 2 or 4-seeded, black.—*Flowers* panicled, terminal.

Ligustrum vulgare. *Common privet.*

Leaves lanceolate or elliptical, mucronate; *panicle* contracted.

Ligustrum, *Raii Syn.* 465, 1; *Ger. em.* 1394.
Ligustrum vulgare, *Park.* 1446; *Lin. S. P.* 10.
Prim-print. Print.

Woods and hedges in damp gravelly soils; shrubby, May and June.

Leaves nearly sessile, deep green, bald, deciduous, edge not cut; *flowers* white.—Cultivated for hedges and screens, as it bears cutting in any form; leaves bitter and astringent; berries with alum dye wool and silk green, and a rose-coloured paint is prepared from them.

β. *sempervirens*. *Leaves* biennial, falling off in the spring.

γ. *variegatum*. *Leaves* variegated, green and straw colour.

Fam. XVIII. 35. FRAXINEÆ. *Oleinarum pars*, Link. *Jasminearum pars*, Jussieu.

Flowers hermaphrodite or unisexual; *calyx* 0, or free, persisting, 1-leaved; *corolla* 0, or hypogynous, 1-petaled and 4-cut, or 4 petaled; petals joined in pairs by the filaments; æstivation rather valvular; *stamens* 2, alternate with the petals or lobes; *anthers* 2-celled; cells opening lengthways; *ovary* 1, simple, not girt with a glandular disk, 2-celled; ovules 2, pendulous, side by side in each cell; *style* 1 or 0; *stigma* simple or 2-cut; *fruit* a capsule or samara, 1-seeded by abortion; *seed* pendulous; spermodermis simple; perisperm fleshy; corculum straight, central, nearly as long as the perisperm; cotyledons leaflike; radicle above; plumule inconspicuous.—*Tree* or shrub; *leaves* opposite, simple or pinnate; *flowers* racemose or panicled, terminal or axillary; *peduncles* opposite, 1-bracteated.

154. FRAXINUS. Pliny. *Ash.*

Flowers unisexual and hermaphrodite; *calyx* 0; *corolla* 0; *stamens* 2, rarely 3 or 4; *anthers* sessile; *ovary* 2-celled; ovules 4; *samara* 1-celled, 1 or 2-seeded; wings lanceolate.

Fraxinus excelsior. *Tall ash.*

Leaflets slightly petioled, lanceolate, pointed, serrate, bald; wedgeshape at bottom; *samara* lanceolate, tips obliquely nicked.

Fraxinus, *Raii Syn.* 269, 1; *Ger. em.* 1472, 1.
Fraxinus vulgaris, *Park.* 1419.
Fraxinus excelsior, *Lin. S. P.* 1509.

Woods and hedges; arborescent; April and May.

Bark grey; *buds* black; *branches* upright or ascending; hermaphrodite, male, and female flowers on different trees rarely on the same.—*Wood* an excellent timber, used also for long handles or shafts; bark and wood diuretic and lithontriptic; samaræ (called ask keys, birds tongue, kite keys,

sparrows tongue) acrid and bitter, their decoction used in diseases of the liver; tops and leaves used to feed cattle in winter and dry summers, but they spoil the taste of the milk if eaten by cows; bark used in tanning; leaves half an ounce to an ounce and half in decoction are a good purgative, and a decoction of 2 dr. of the bark, or 6 dr. of the leaves are used to cure agues.

β. *aurea.* *Bark* golden yellow.

γ. *verrucosa.* *Bark* warty.

δ. *heterophylla.* *Leaves* simple and ternate, or quinate.

ε. *simplicifolia.* *Leaves* all simple.

ζ. *horizontalis.* *Leaves* pinnate; *branches* horizontal.

η. *pendula.* *Leaves* pinnate; *branches* pendulous.
River sides. Wood of little value.

θ. *erosa.* *Leaflets* torn on the edges.

ι. *argentea.* *Leaves* variegated, whitish green and silver colour.

Subseries III. C. PLANTÆ EXOGENÆ CALYCIFLORÆ.
Dicotyledones petaloideæ perigynæ, Jussieu.

Perigonium double; *petals* many, distinct, or soldered together, inserted along with the stamens on the calyx.

FAMILIES.

A. *Perisperm fleshy, or horny.*

a. *Seeds on a central spermophore, or affixed at the base; radicle below.*

Ovary free; *capsule* or *berry* 4 or 5-celled; *stamens* 3 to 10, opposite to the lobes ... ERICINÆ. 36.

Ovary free; *capsule* 1-celled ... PORTULACEÆ. 48.

Ovary free, 2 to 5-celled; cells few-seeded; *stamens* 4 or 5, alternating with the petals or lobes ..... CELASTRINÆ. 64.

Ovary adherent, rarely free; *capsule* 2-celled, dehiscent by an orifice; *stamens* 8 to 10 SAXIFRAGEÆ. 46.

Ovary adherent; *capsule* 2 to 5-celled, becoming ruptured; *stamens* 5 .. CAMPANULACEÆ. 38.

Ovary adherent; *berry* 4 or 5-celled VACCINIEÆ. 37.

Ovary adherent; *fruit* 2-seeded; *leaves* not cut, in whirls ..... RUBIACEÆ. 42.

b. *Seeds inverted*, i.e. *radicle above; ovary adherent.*

Akenium; stamens 4, alternating with the lobes of the corolla; *flowers* aggregate. DIPSACEÆ. 40.

Utriculus or *capsule*, few-seeded PARONYCHIDEÆ. 49.

Berry 3 or 4-celled; *stamens* 4 or 5, alternating with the lobes or petals CAPRIFOLIACEÆ. 43.

Berry few-seeded; *stamens* 4 to 8, opposite to the petals; *plant* parasitic ... LORANTHIDEÆ. 44.

Polakenium 2-celled, separable; *petals* 5; *stamens* 5, interposed; *flowers* in umbels UMBELLIFERÆ. 45.

c. *Seeds parietal; ovary adherent.*

Berry 1-celled; *stamens* and *petals* 5 GROSSULARIÆ. 50.

B. *Perisperm* 0, *or very thin.*

a. *Seeds on a central spermophore, or at the base; radicle below.*

Calyx free; *stamens* 5; *capsule*. TAMARICINÆ. 53.
Calyx free; *stamens* 6 to 12; *capsule* SALICARIÆ. 52.
Calyx free; *stamens* 4 or 5, opposite to the petals; *berry*..... RHAMNEÆ. 65.
Calyx adherent; *stamens* 2 to 8; *petals* 2 or 4..... ONAGRIÆ. 56.
Calyx adherent; *stamens* indefinite; *petals* 5 ..... POMACEÆ. 57.

b. *Seeds parietal; radicle below.*

Ovary adherent; *stamens* 3 to 5 CUCURBITACEÆ. 51.
Ovary free; *legumen*; *corolla* papilionaceous ..... LEGUMINOSÆ. 63.
Ovary free; *camares* many ... CRASSULACEÆ. 47.

c. *Seeds inverted*, i.e. *radicle above.*

Stamens 5; *anthers* united; *akenium* COMPOSITÆ. 39.
Stam. 1 to 3, distinct; *corolla* tubular VALERIANEÆ. 41.
Stam. 1 to 8, distinct; *cor.* 0, or 4-petaled ..... HALORAGEÆ. 55.
Stam. 4, 5, or indefinite; *cor.* 0, or 5-petaled; *ovaries* definite, 1-seeded, enclosed in the calyx ..... AGRIMONIACÆ. 59.
Stam. indefinite; *corolla* 5-petaled; *ovaries* indefinite, 1-seeded, enclosed in the calyx..... ROSACEÆ. 58.
Stam. indefinite; *corolla* 5-petaled; *ovaries* indefinite, 1-seeded, free ..... DRYADEÆ. 60.
Stam. indefinite; *corolla* 5-petaled; *ovaries* definite, 3 to 10, free, 1 or 2-seeded..... ULMARIÆ. 61.
Stam. indefinite; *corolla* 0; *ovary* 1; *cotyledons* 4 ..... CERATOPHYLLÆ. 54.
Stam. indefinite; *corolla* 0; *ovary* 1; *drupe* 1 or 2-seeded ..... DRUPACEÆ. 62.

Fam. I. 36. ERICINÆ. Desvaux. *Ericaceæ et Bicornes*, Ventenat. *Ericæ et Rhododendræ*, Jussieu. *Rhododendraceæ*, Mirbel. *Bicornum pars*, Linnæus. *Monotropæ*, Nuttall.

Calyx 1-leaf, 4 or 5-cut, persisting, free; *corolla* hypogynous, 1-petaled, 4 or 5-cut or parted, regular, falling off or withering; æstivation imbricate; *stamens* definite, 3, 8, or 10, opposite, equal or double the number of the lobes, hypogynous, *i. e.* inserted into the lobes of the corolla; *ovary* many-celled, girt at bottom with a scaly or secreting disk; ovules many; *style* 1; *stigma* 1, not nicked or toothed; *pericarpium* a capsule or berry, many-celled; spermophore central, axillary; *seeds* many; perisperm fleshy; corculum axillary, straight; radicle near the hylum. — *Shrubs* or undershrubs; *leaves* perennial or annual; alternate or opposite; *inflorescence* various; *peduncles* mostly 2-bracteated.

Stamens 3 or 9; *calyx* 3-parted; *corolla* 3-parted ..... EMPETRUM. 164.
Stam. 5; *corolla* bellshape ..... CHAMÆCISTUS. 163.
Stam. 8; *corolla* bellshape; *capsule* dehiscent, septicidal ..... MENZIESIA. 155.
Stam. 8; anthers enclosed; *corolla* ventricose; *capsule* dehiscent, loculicidal EREMOCALLIS. 157.
Stam. 8; anthers exserted; *corolla* bellshape; *capsule* dehiscent, loculicidal .. GYPSOCALLIS. 158.
Stam. 8; horned; *corolla* tubular; *capsule* dehiscent, septifragal ..... CALLUNA. 159.
Stam. 8 or 10; *corolla* 4 or 5-parted; *anthers* 1-celled, peltate; *plant* parasitic MONOTROPA. 166.
Stam. 10; *corolla* ovate, 5-cut; *capsule* dehiscent, loculicidal ..... ANDROMEDA. 160.
Stam. 10; *corolla* 5-parted; *anthers* 2-celled; *capsule* 5-celled..... PYROLA. 165.
Stam. 10; *corolla* 5-parted; *anthers* 2-celled, 2-horned; *capsule* 5-celled ..... MONESES. 166.
Stam. 10; *corolla* bellshape; *capsule* dehiscent, septicidal ..... PHYLLODOCE. 156.
Stam. 10; villous; *berry* many-seeded .. ARBUTUS. 161.
Stam. 10; bald; *berry* 5-seeded ..... UVA-URSI. 162.

A. *Anthers* 2-celled, opening in 2 foramens; *corolla* tubular, 5-cut.

I. 155. MENZIESIA. Jussieu. *Menzies.*

Calyx 4-parted; *corolla* bellied, falling off; *limb* 5-cut, recurved, *stamens* 8; *filaments* on the base of the corolla; *anthers* opening at the tip by 2 reverse-ovate foramens; *capsule* 4-celled; dehiscence septicidal; *seeds* many, scrobiculate. — *Stem* undershrubby; *leaves* alternate, broad, lanceolate, annual; *edge* not cut, turned down; *flowers* spiked, drooping; *bracteæ* 3 to each peduncle, 2 side ones smaller.

Menziesia polifolia. *Many-leaved menzies.*

Leaves ovate; edge turned over, beneath tomentose, snowy; *racemes* long.

Erica Cantabrica flore maximo, foliis myrti subtus incanis, *Dillen in Raii Syn.* 472, 6.
Erica Sancti Dabeoci Hibernis D. Lhwyd. *Raii Hist.* 3; *Dendr.* 98.
Vaccinium Cantabricum, *Huds. Fl. Angl. ed.* 1, 143.
Erica Daboecia, *Lin. S. P.* 509.
Andromeda Daboecia, *Lin. Syst. Veg. ed.* 13, 338.
Menziesia polifolia, *Juss. Ann. Mus.* 1, 55.
Menziesia Daboecia, *De Cand. Fl. Gall.* 674.
Irish heath.

Mountain bogs, in Ireland; shrubby; June and July.

Stem slender, upright; *lower leaves* opposite; *flowers* purple.

II. 156. PHYLLODOCE. R. A. Salisbury. *Phyllodoce.*

Calyx deeply 5-cut; *corolla* bellied, falling off; tube 5-cut, bent; *stamens* 10, at the bottom of the corolla; *anthers* opening near the tip in 2 reverse-ovate foramens; *capsules* 5-celled; dehiscence septicidal; *seed* semi-orbiculate.—*Stem* shrubby; *leaves* linear, perennial; edges turned down; furrowed beneath; *flowers* aggregate, out of the axilla of the terminal leaves.

Phyllodoce taxifolia. *Yew-leaf phyllodoce.*

Leaves linear, blunt, edge toothed; teeth cartilaginous; *tube* of the corolla pitchershape.

Andromeda cærulea, *Lin. S. P.* 563.
Erica cærulea, *Willd. Sp. P.* 2, 39.
Andromeda taxifolia, *Pallas Fl. Ross.* 2, 54.
Menziesia cærulea, *Swartz Act. Holm.* 10, 377.
Phyllodoce taxifolia, *Salisb. Parad. Lond.* 36.

Heaths; shrubby; June and July.

Leaves fringed with glandular hairs; *flowers* bluish flesh-colour.

III. 157. EREMOCALLIS. R. A. Salisbury, MS. *Heath.*

Calyx 4-parted; *corolla* conical, bellied; limb 4-cut, recurved; *stamens* 8, enclosed; *anthers* awned at the bottom, opening in 2 oblong pores; *stigma* blunt; *capsule* 4-celled, 4-valved; dehiscence loculicidal. — *Stem* shrubby; *leaves* entire, linear, edge turned down, furrowed beneath; *flowers* lateral or terminal; *calyx* 2 or 3 bracteated at the bottom.

1. *Eremocallis glomerata.* *Headed heath.*

Leaves 4 in a whirl, fringed; *flowers* in heads; *style* enclosed; *stigma* blunt.

Erica Brabantica folio coridis hirsuto quaterno, *Raii Syn.* 471, 4.
Erica major flore purpureo, *Ger. em.* 1382, 4; description only.
Erica pumila Belgarum Lobelio, scoparia nostras, *Park.* 1482.
Erica tetralix, *Lin. S. P.* 502.
Erica cotuliformis, *Trans. Lin. Soc.* 6, 369.
Erica glomerata, *Salisb. Prod.* 293.

Damp heaths; shrubby; July and August.

Leaves petioled, spread, revolute; *hairs* glandular, with heads; *flowers* looking one way, flesh-colour, or white.

2. *Eremocallis cinerea.* *Grey heath.*

Leaves 3 in a whirl; *flowers* racemose; *style* slightly exserted; *stigma* headed.

Erica tenuifolia, *Raii Syn.* 472, 3; *Ger. em.* 1382, 7.
Erica cinerea, *Lin. S. P.* 501.
Erica mutabilis, *Salisbury T. Lin. S.* 6, 369.
Small heath. Thin-leaved heath.

Heaths; shrubby; July and August.

Leaves triangular, bald; *racemes* in whirls; *flowers* bluish or white.

IV. 158. GYPSOCALLIS. R. A. Salisbury, MS. *Gypsum-heath.*

Calyx 4-parted; *corolla* bellshape; limb 4-cut; *stamens* 8, exserted; *anthers* erect, awnless, opening at the tip in two reverse-ovate foramens; cells distinct; *stigma* 4-cut; *capsule* 4-celled, 4-valved; dehiscence loculicidal. — *Stem* shrubby; *leaves* not nicked; edge turned down; *flowers* axillary; *bracteæ* 2, in the middle of the peduncles.

Gypsocallis vagans. *Loose gypsum-heath.*

Leaves 4 or 5 in a whirl; *flowers* peduncled, crowded.

Erica foliis corios multiflora, *Raii Syn.* 471, 5.
Erica didyma, *Stokes in Wither. Bot. Arr. ed.* 2, 400.
Erica vagans, *Lamarck Fl. Gall.* 2, 230.
Erica vaga, *Salisb. Prod.* 294.
Erica purpureacea, *Lamarck Enc. Meth.* 1, 483.
Fir-leaved heath.

Heaths in Cornwall; shrubby; July and August.

Stem much branched, upright; *leaves* triangular; *corolla* flesh-colour.

V. 159. CALLUNA. R. A. Salisbury. *Ling.*

Calyx 4-parted, nearly as long as the corolla; *corolla* tubular, bellshape, 4-cut; *stamens* 8; *anthers* awned, opening by 2 pores; *stigma* 4-lobed; *capsule* 4-celled, 4-valved; dehiscence septifragal. — *Stem* shrubby; *leaves* opposite, squarrose, in 4 rows; *flowers* racemose, facing one way, drooping; *bracteæ* 4, at the base of the calyx.

Calluna sagittæfolia. *Arrowleaved ling.*

Leaves arrowshape.

Erica vulgaris, *Raii Syn.* 470, 1; *Park.* 1480.
Erica vulgaris, sive pumila, *Ger. em.* 1380, 1.
Erica sagittæfolia, *Stokes Bot. M. M.* 371.
Calluna Erica, *De Candolle Fl. Gall.* 680.
Common heath or ling. Heather.

Heaths and woods; shrubby; June and July.

Stem ascending; *flowers* flesh-colour or white.—Young tops brewed along with half as much malt into a good beer; decoction tans leather and dyes alummed wool yellow. Honey, where it abounds, has a reddish cast. The plant is also used for binding mud cottages, for thatching, for making ropes, for brooms, for firing, for filling drains, and for beds, being confined in a frame with the flowering tops uppermost.

β. hirsuta. *Leaves* downy.

Erica vulgaris hirsuta, *Raii Syn.* 471, 2; *Ger. em.* 1380, 2.
Erica vulgaris hirsutior, *Park.* 1480.
Erica ciliaris, *Huds. Fl. Angl. ed.* 1, 144.

VI. 160. ANDROMEDA. Linnæus. *Andromeda.*

Calyx very small, 5-parted; *corolla* ovate, bellied, 5-cut; limb reflected; *stamens* 10; *anthers* 2, horned above, opening in 2 foramens; *capsule* 5-celled, 5-valved; dehiscence loculicidal.—*Stem* shrubby; *leaves* perennial, alternate, edge turned over; *flowers* aggregated, terminal; *peduncles* bracteated at bottom.

Andromeda polifolia. *Many-leaved andromeda.*

Leaves alternate, lanceolate, edge turned over; *peduncles* terminal, aggregated; *corolla* ovate.

Ledum palustre nostras, arbuti flore, *Raii Syn.* 472, 1.
Rosmarinum sylvestre minus nostras, *Park.* 76.
Andromeda polifolia, *Lin. S. P.* 564.
Andromeda montana, *Salisb. Prod.* 290.
Marsh cistus. Wild rosemary.

Turf bogs: shrubby; June.

Rhizoma creeping; *stem* creeping; *leaves* pointed, glaucous beneath; *flowers* flesh-colour.

VII. 161. ARBUTUS. Pliny. *Strawberry-tree.*

Calyx very small, 5-cut; *corolla* ovate; limb small, 5-cut, turned over, inside villous; *stamens* 10; filaments villous beneath; *anthers* awned, opening at the tip with 2 pores; *stigma* peltate; *berry* tubercular, 5-celled; cells many-seeded.—*Stem* woody; *leaves* perennial, alternate; *flowers* terminal, racemous, panicled; *bractea* 1, at the bottom of each peduncle.

Arbutus serratifolia. *Sawleaf strawberry-tree.*

Stem shrubby; *leaves* oblong, bald, bluntly serrate; *racemes* compound, terminal, drooping.

Arbutus, *Raii Syn.* 464, 1; *Ger. em.* 1496; *Park.* 1489.
Arbutus Unedo, *Lin. S. P.* 566.
Arbutus serratifolia, *Salisb. Prod.* 208.
Arbutus. Arbute-tree.

Chalky rocks; shrubby; September.

Leaves blunt; *flowers* reddish white.

VII. 162. UVA-URSI. Dodonæus. *Bears-grape.*

Calyx small, 5-parted; *corolla* ovate; limb small, 5-cut, turned over; *stamens* 10; *filaments* bald; *anthers* awned, opening by 2 pores at the base; *berry* smooth, 5-celled, 4 or 5-seeded.—*Stem* undershrubby; *leaves* perennial, reticulately veined; *flowers* terminal, racemose; *bractea* 1 to each peduncle.

1. *Uva-ursi buxifolia.* *Box-leaf bears-grape.*

Leaves reverse-ovate, blunt; edge not in the least cut.

Vitex Idæa q. Vaccinia rubra foliis myrtinis crispis, *Raii Syn.* 457, 4.
Vaccinia ursi, sive Uva ursi apud Clusium, *Ger. em.* 1416, 5.
Uva ursi Galeni, Clusii, *Park.* 1457.
Arbutus Uva-ursi, *Lin. S. P.* 566.
Arbutus procumbens, *Salisb. Prod.* 289.
Arbutus buxifolia, *Stokes Bot. M. M.* 509.
Bears whortleberry.

Alpine heaths; shrubby; June.

Stem procumbent, much branched; bark smooth; *leaves* alternate; *corolla* flesh-colour; *berry* red, austere.

2. *Uva-ursi alpina.* *Alpine bears-grape.*

Leaves reverse-ovate, pointed, wrinkled; edge serrated.

Vêronica Pannonica, sive Vitis Idæa, *Ger. em.* 1416, 4.
Vaccinia nigra Pannonica, *Park.* 1486.
Arbutus Alpina, *Lin. S. P.* 566.
Hungary whortleberries.

Dry alpine rocks; shrubby; May.

Stem prostrate; bark falling off; *leaves* fringed; *corolla* white; *bracteæ* fringed; *berry* black.

B. *Anthers* 2-celled, opening by 2 foramens; *corolla* 2 to 5-parted, nearly to the base.

IX. 163. CHAMÆCISTUS. Clusius. *Rose-bay.*

Calyx 5-parted; *corolla* bellshaped; limb 5-parted, regular; *stamens* 5, equal, enclosed, not declinate; *capsule* ovate, 5-celled; dehiscence septicidal; *seeds* many.—*Shrub* procumbent; *leaves* opposite, edge turned over, not nicked, furrowed beneath, perennial; *flowers* terminal, upright, solitary or in pairs; *bracteæ* 3 at the base of each peduncle, 2 large, 1 small.

Chamæcistus serpyllifolius. *Thyme-leaf rose-bay.*

Branches diffuse, procumbent; *leaves* elliptical, quite bald.

Chamæcistus serpyllifoliis, *Ger. em.* 1284.
Azalea procumbens, *Lin. S. P.* 215.
Thyme-leaved dwarf cistus.

Alpine heaths; shrubby; July and August.

Stem much branched, branches intermixed; *leaves* petioled, spread, blunt; petioles fringed; *flowers* dark rose-colour.

X. 164. EMPETRUM. Dioscorides. *Crakeberry.*

Calyx 3-parted; *corolla* 3-parted or 3-petaled; lobes turned over; *stamens* very long, opposite to the lobes, 3, or rarely 9; *anthers* opening lengthways on the sides; *ovary* flattened; *style* 1, short; *stigma* 9-rayed; *berry* flattened, 6 or 9-seeded.—*Shrub* low; *leaves* crowded, alternate or nearly whirled, small; edge turned over, concave beneath; *flowers* solitary, axillary, unisexual, rarely hermaphrodite, frequently dioicous; *bracteæ* 3 to each flower.

Empetrum nigrum. *Black crake-berry.*

Stem procumbent; twigs bald; *leaves* oblong, blunt, bald; edge turned over, fringed.

Empetrum montanum, fructu nigro, *Raii Syn.* 444, 1.
Erica baccifera procumbens, *Ger. em.* 1383, 9.
Erica baccifera nigra, *Park.* 1485.
Empetrum nigrum, *Lin. S. P.* 1450.
Crow-berries. Blackberry heath.

Mountain heaths; shrubby; May.

Bark falling off; inner bark yellow; *leaves* membranaceous, swollen, furrowed underneath; *petioles* very short; *corolla* and *anthers* purple; *berries* black.

XI. 165. PYROLA. Brunsfel. *Winter-green.*

Calyx very small, 5-parted; *corolla* 5-parted; *stamens* 10, 2 at the base of each lobe; *anthers* opening by 2 reverse-ovate foramens at the base, becoming reversed; *stigma* peltate; *capsule* 5-celled, many-seeded; dehiscence loculicidal; *seeds* with a membranous wing. — *Stem* creeping, scaly, twigs upright; *leaves* perennial, alternate, petioled, bald; *flowers* peduncled, terminal, whitish, racemose, mostly drooping; *bractea* mostly 1 at the base of each peduncle.

a. Orpheus. *Corolla irregular; stamens ascending; style declinate; stigma rotate, 5-tubercled, with a central point; nectary* 0.

1. *Pyrola rotundifolia.* *Round-leaved winter-green.*

Leaves roundish; *racemes* many-flowered; *bracteæ* lanceolate, as long as the peduncles; *calyx* as long as the stamens; *stamens* ascending; *style* declinate, twice as long as the stamens.

Pyrola, *Raii Syn.* 363, 1; *Ger. em.* 408, 1.
Pyrola nostras vulgaris, *Park.* 508.
Pyrola rotundifolia, *Lin. S. P.* 187.
Pyrola declinata, *Mœnch Meth.* 315.
Common winter-green.

Woods and mountains; perennial; July.

Root scaly, creeping; *leaves* dilated, slightly crenated, rather leathery, about as long as the petiole; *bracteæ* few, on the lower part of the peduncle; *flowers* white.

b. Pyrola. *Cor. regular; stamens incurved; anthers opening at top; stigma peltate; nectaries* 5; *racemes regular.*

2. *Pyrola media.* *Middlesize winter-green.*

Leaves roundish; *racemes* many-flowered; *peduncles* twisted; *corolla* globose; *stamens* regularly inflected, longer

than the calyx; *style* declining perpendicularly, twice as long as the stamens.

Pyrola media, *Swartz Act. Holm.* 1804, 263.

Woods; perennial; June.

3. *Pyrola minor.* *Small winter-green.*

Leaves roundish; *racemes* many-flowered; *peduncles* straight; *stamens* regularly bent; *style* straight, half as long as the stamens; *stigma* pointed.

Pyrola minor, *Raii Syn.* 363, 2; *Lin. S. P.* 187.
Pyrola rosea, *Engl. Bot.* 2543.

Woods; perennial; July and August.

Peduncles nearly naked; *flowers* white or reddish.

c. Alsoganum. *Corolla regular; stamens incurved; anthers opening at the base; nectaries* 10; *racemes* 1-*rowed.*

4. *Pyrola secunda.* *One-rowed winter-green.*

Leaves ovate, pointed, serrated; *racemes* many-flowered; *peduncles* straight; *bracteæ* lanceolate, as long as the peduncle; *stamens* regularly bent; *style* straight, longer than the stamens.

Pyrola folio mucronato serrato, *Raii Syn.* 363, 3.
Pyrola secunda tenerior Clusii, *Ger. em.* 408, 2.
Pyrola tenerior, *Park.* 509.
Pyrola secunda, *Lin. S. P.* 187.
Small winter-green.

Mossy parts of alpine woods; perennial; July.

Stem procumbent, much branched; *corolla* greenish-white; lobes oblong.

XII. 166. MONESES. R.A. Salisbury, MS. *Moneses.*

Calyx small, 5-parted; *corolla* 1-petal, 5-lobed; *stamens* 10, bent inwards, 2 at the base of each lobe; *anthers* 2-horned at the base, becoming reversed, opening at the bottom of each horn by a foramen; *style* straight; *stigma* radiated; *nectaries* 0; *capsule* 5-celled, 5-valved; dehiscence loculicidal; *seeds* many.—*Root* creeping; *stem* herbaceous, simple; *leaves* petioled, alternate, roundish, reticulately veined; *peduncle* single, terminal, 1-flowered; *bractea* 1, distant from the flower; *flower* large, white, drooping, fragrant.

Moneses grandiflora. *Large-flowered moneses.*

Leaves reverse-ovate, blunt, serrate; *peduncle* longer than the leaves.

Pyrola quarta minima Clusii, *Ger. em.* 408, 4.
Pyrola uniflora, *Lin. S. P.* 568.
Round-leaved winter-green.

Moist places in alpine woods; perennial; July.
Peduncles upright; *flowers* smell like the may-lily, white, with reddish lines.

C. MONOTROPÆ. *Anthers* peltate, horizontal, 1-celled, not opening by 2 foramens; *plant* leafless, parasitical.

XIII. 167. HYPOPITYS. Dillenius. *Pine-sap.*

Calyx 3 to 5-parted; *corolla* 3 to 5-parted, falling off, lobes hooded at the bottom; *stamens* 6 to 10, 2 at the base of each lobe; *anthers* small, horizontal, 1-celled, opening flat at last; *stigma* orbicular, edge bearded; *capsule* 5-celled, 5-valved; *seeds* many, awlshape, minute, winged.—*Plant* parasitic, destitute of verdure, odour musty; *root* fibrous; *stems* aggregate, simple, enlarged at bottom, fleshy, scaly; scales imbricate below, alternate above; *racemes* first bent, then upright; *flowers* pedicelled; bractea 1 to each flower.

Hypopitys lutea. *Yellow pine-sap.*
Plant yellow, bald; *flowers* peduncled, 3 or 4-cut; terminal flower 5-cut.

Hypopitys lutea, *Raii Syn.* 317, 1.
Monotropa Hypopithys, *Lin. S. P.* 555.
Hypopitys europæa, *Nutall Gen.*
Yellow Birds-nest.

On the roots of birches or pines; perennial; June.
Herb on drying becomes black, and acquires a stronger odour; *bracteæ* scaly.

Fam. II. 37. VACCINIEÆ. De Candolle. *Ericacearum pars*, Ventenat. *Ericarum pars*, Jussieu. *Bicornum pars*, Linnæus. *Vacciniorum pars*, Adanson.

Calyx 1-leafed, not cut or toothed, small, adherent to the ovary; *corolla* hypogynous, 1-petaled, 4 or 5-parted, regular, falling off; æstivation imbricate; *stamens* definite, 8 or 10, 2 at the base of each lobe, hypogynous; *anthers* opening by 2 pores; *ovary* adherent, many-celled; *style* 1; *stigma* 1, either cut or not; *berry* umbilicated, 4 or 5-celled; cells many-seeded; *seeds* on a central spermophore; perisperm fleshy; corculum nearly as long as the perisperm; cotyledons very short; radicle very long, below.

Corolla ovate, 4-cut; *anthers* 2-horned VACCINIUM. 168.
Cor. bellshape, 4-cut; *anthers* hornless;
filaments woolly ..... VITIS-IDÆA. 169.
Cor. bellshape, 4-cut; *anthers* hornless;
filaments bald ..... OXYCOCCUS. 170.

I. 168. VACCINIUM. Pliny. *Bilberry.*

Calyx 4 or 5-toothed; *corolla* bellshape, ovate, limb 4-cut, lobes reflexed; *stamens* 8 or 10; *filaments* bald; *anthers* 2-horned; *stigma* simple; *berry* 4 or 5-celled, many-seeded.—*Stem* shrubby; *leaves* annual; *flowers* solitary, drooping.

1. *Vaccinium montanum.* *Mountain bilberry.*

Stem angular; *leaves* alternate, petioled, serrate; *flowers* solitary, axillary.

Vitis Idæa angulosa, *Raii Syn.* 457, 2.
Vaccinia nigra, *Ger. em.* 1415, 1.
Vaccinia nigra vulgaria, *Park.* 1456.
Vaccinium Myrtillus, *Lin. S. P.* 498.
Vitis Idæa Myrtillus, *Mœnch Meth.* 47.
Vaccinium montanum, *Salisb. Prod.* 291.
Black whorts. Black whortleberries. Blackberries. Bullberries. Wineberries.

Spongy places in mountain woods; shrubby; May.

Leaves light green; *flowers* peduncled, flesh-coloured, globose; *calyx* 5-toothed; *corolla* mostly 5-cut; *stamens* 10; *berries* black, rarely white, esculent.

2. *Vaccinium uliginosum.* *Moor bilberries.*

Stem round; *leaves* reverse-ovate, bald; edge not cut in the least, rather turned over; beneath glaucous; *flowers* solitary, axillary.

Vitis Idæa magna quibusdam, sive Myrtillus grandis, *Raii Syn.* 457, 1.
Vitis Idæa foliis subrotundis major, *Ger. em.* 1416, 6.
Vaccinia nigra, fructu majore, *Park.* 1455.
Vaccinium uliginosum, *Lin. S. P.* 499.
Great bilberry.

Bogs on mountain heaths; shrubby; April and May.

Leaves blunt, veiny; *flowers* flesh-coloured, 4-cut; *stamens* mostly 8; *berries* black, esculent; *seeds* streaked.

II. 169. VITIS-IDÆA. Pliny. *Cowberry.*

Calyx 4-cut; *corolla* bellshape, 4 or 5-parted; lobes turned over, easily separable into 4 petals; *stamens* 8 or 10; *filaments* woolly; *anthers* awnless, tip tubular, open;

stigma simple; *berry* 4-celled, many-seeded.—*Leaves* alternate, perennial, petioled; *flowers* racemose, flesh-colour, drooping; *bracteæ* 1, at the base of each flower.

Vitis-Idæa punctifolia. *Dotted-leaf cowberry.*

Leaves reverse-ovate, dotted beneath; edge turned over, toothed; *racemes* terminal, drooping.

Vitis Idæa semper virens fructu rubro, *Raii Syn.* 457, 3.
Vaccinia rubra, *Ger. em.* 1415, 2.
Vaccinia rubra buxeis foliis, *Park.* 1458.
Vaccinium Vitis-Idæa, *Lin. S. P.* 500.
Vaccinium nemorosum, *Salisb. Prodr.* 291.
Vaccinium punctifolium, *Stokes Bot. M. M.* 368.
Vitis-Idæa punctata, *Mœnch Meth.* 47.
Red whortle-berry.

Turfy heaths; shrubby; June.

Stem very low, ascending, cylindrical; *leaves* thick, stiff, ending in a rounded tubercle, reticulately veined; edge not cut, serrate or toothed; *bracteæ* coloured, fringed, concave; *flowers* flesh-colour; *berries* red, acid, unpleasant until baked.

III. 170. OXYCOCCUS. Cordus. *Craneberry.*

Calyx 4-cut; *corolla* 4 or 5-parted; lobes linear, turned over, becoming separate; *stamens* 8 or 10, exserted; *filaments* connivent, bald; *anthers* awnless, ending above in long tubes; tubes separate, open; *stigma* pointed; *berry* 4-celled, many-seeded.—*Stem* shrubby; *leaves* perennial, alternate, petioled; *peduncles* terminal, solitary, 1-flowered, bracteated at bottom; *flowers* flesh-colour, drooping.

Oxycoccus palustris. *Marsh craneberry.*

Stem naked, threadshape, creeping, bald; *leaves* ovate, edge not in the least cut, turned over; beneath glaucous.

Oxycoccus, sive vaccinia palustria, *Raii Syn.* 267, 1.
Vaccinia palustria, *Ger. em.* 1417.
Vaccinium palustre, *Park.* 1229.
Vaccinium Oxycoccus, *Lin. S. P.* 500.
Oxycoccus palustris, *Pers. Syn.* 410.
Vaccinium palustre, *Salisb. Prod.* 291.
Schollera Oxycoccus, *Roth Germ.* 2, 442.
Cranberries. Moss berries. Moor berries. Fen grapes. Fenberries. Marsh whortleberries. Marshworts.

Bogs on mountains; perennial; June.

Stem lying down; *leaves* small, petioled, upright; *berry* pale red, mottled, or purplish red.—Berries have a peculiar flavour, but are esteemed by some in tarts.

Fam. III. 38. CAMPANULACEÆ. De Candolle.

Campanulæ, Jussieu.

Calyx 4 or 8-cut, equal, persisting; *corolla* 1-petaled, regular or rarely irregular, 4, 5, 6, or 8-cut, rarely 5-petaled; claws broad, connivent, falling off or withering; *stamens* as many as the lobes, alternate with them, adnate to the disk; *anthers* fixed at the base, 2-celled; cells opposite, opening lengthways, distinct or cohering; *ovary* 1, many-celled; ovules many; *style* 1; *stigma* 1, or as many as the cells of the ovary, naked; *capsule* below, opening by foramens on the side, or in exotics half-above; tip valvular; valves septiferous in the middle; *seeds* many, small; perisperm fleshy; corculum axile, straight, nearly as long as the perisperm.—*Stem* herbaceous, often yielding a milk; *leaves* alternate, simple; *stipulæ* 0; *flowers* distant; racemose, axillary, or capitate, girt with a many-leaved involucrum.

Corolla bellshape, 5-cut; *caps.* 3-celled CAMPANULA. 171.
Cor. rotate; lobes heartshape; *caps.* prismatic ..... LEGOUSIA. 172.
Cor. rotate; lobes linear; *anthers* distinct ..... PHYTEUMA. 173.
Cor. rotate; lobes linear; *anthers* joined JASIONE. 174.
Cor. unequal, 2-lipped; lower lip 3-parted; *anthers* joined; *stigma* simple ..... LOBELIA. 175.

A. *Flowers* regular; *stigma* lobed.

I. 171. CAMPANULA. Dodonæus. *Bellflower.*

Calyx 5-cut, segments not turned back; *corolla* bellshape, 5-cut; *stamens* 5; *filaments* dilated at bottom, covering the top of the capsule; *anthers* upright; *stigma* 3-parted; *capsule* reverse-pyramidical, 3 to 5-celled, opening by foramens on the side.—*Stem* herbaceous; *lower leaves* petioled; upper leaves mostly sessile; *flowers* bracteated, axillary, solitary or in bundles, or racemes, terminal or rarely solitary.

1. *Campanula hederacea.* *Ivy-leaf bellflower.*

Stem weak; *leaves* heartshape, 5, 6, or 8-angled, bald; *peduncles* solitary, 1-flowered.

Campanula cymbalariæ folio, *Raii Syn.* 277, 7; *Ger. em.* 452, 7; *Park.* 652.
Campanula hederacea, *Lin. S. P.* 240.

Damp hedges and bogs; perennial; July and August.

Stem trailing, matted, diffuse; *leaves* opposite or alternate, very delicate, transparent; *peduncles* mostly terminal; *flowers* drooping, pale sky-blue; *capsules* hemispherical.

2. *Campanula heterophylla.* *Odd-leaved bellflower.*

Stem round, much branched, diffuse; *root-leaves* rather roundish, deeply crenated; stem-leaves slender, linear; *lobes* of the calyx not cut, horizontal.

Campanula rotundifolia, *Raii Syn.* 277, 5; *Ger. em.* 452, 3; *Lin. S. P.* 232.
Campanula minor sylvestris rotundifolia, *Park.* 651.
Campanula variifolia, *Salisb. Prod.* 126.
Round-leaved bellflower.

Heaths and walls; perennial; August and September.

Root woody; *stem* upright; *radical leaves* kidneyshape, heartshape or oblong, pointed; *flowers* panicled, tremulous, blue or white.

3. *Campanula linifolia.* *Flax-leaved bellflower.*

Root-leaves reverse-ovate, rather downy; stem-leaves linear, lanceolate, slightly toothed; *stem* mostly 1-flowered; *lobes* of the calyx not cut, upright.

Campanula minor alpina, rotundioribus imis foliis, *Raii Syn.* 277, 6.
Campanula linifolia, *Jacq. Coll.* 2, 81.
Campanula uniflora, *Huds. Fl. Angl. ed.* 1. 81. not of Linnæus.
Campanula rotundifolia β, *Smith Fl. Brit.* 235.

Alpine rocks and fields; perennial; August.

Root rather woody; *stem* upright, round; *flowers* blue.

4. *Campanula patula.* *Spreading bellflower.*

Stem angular; *leaves* stiff; root-leaves lanceolate, oval, blunt; stem-leaves lanceolate, pointed; *panicles* spreading; *lobes* of the calyx lanceolate, denticulate.

Campanula minor alba, sive purpurea, *Ger. em.* 452, 5.
Campanula patula, *Lin. S. P.* 232.

Fields and hedges; biennial; July and August.

Root white, attenuated, esculent; *stem* rough, panicled; *leaves* roughish, slightly crenate, milkbearing, bitter; *bracteæ* lanceolate, short; *flowers* upright, in threes; *corolla* light-blue, with three reddish lines.

5. *Campanula esculenta.* *Eatable bellflower.*

Root fusiform; *stem* angular; *leaves* waved, hairy; root-leaves lanceolate; stem-leaves linear; *panicle* very close.

Campanula q. rapunculus esculentus, *Raii Syn.* 277, 4.
Rapuntium parvum, *Ger. em.* 453, 2.
Rapunculus esculentus vulgaris, *Park.* 648.
Campanula Rapunculus, *Lin. S. P.* 232.
Campanula esculenta, *Salisb. Prod.* 126.
Rampions. Small rampion.

Fallow-fields, ditch banks, also cultivated; biennial or perennial; July and August.

Root white, sweet; *leaves* toothed; *panicle* many-flowered; *peduncles* upright; *bracteæ* linear; *lobes* of the calyx awl-shape; *flowers* blue or white.—Root esculent, fine-tasted in salads.

6. *Campanula latifolia.* *Broad-leaved bellflower.*

Stem rather round, quite simple; *leaves* ovate-lanceolate, rough, irregularly serrated; *peduncles* 1-flowered; *fruit* drooping.

Campanula maxima, foliis latissimis, *Raii Syn.* 276, 1.
Trachelium majus Belgarum, sive giganteum, *Ger. em.* 448, 3.
Trachelium majus Belgarum, *Park.* 643.
Campanula latifolia, *Lin. S. P.* 233.
Giant throat-wort. Haskwort. Uvula-wort.

Woods and hedges; perennial; August.

Plant milky; *stem* 4 feet high, hispid, many-flowered; *peduncles* axillary; *flowers* very large, blue or pale-red.

7. *Campanula rigida.* *Crisp bellflower.*

Root creeping; *stem* branched; *leaves* heartshape, lanceolate, round, rough, unequally serrated; *flowers* spread, 1-rowed, drooping; *calyx* rough; lobes reflex, not cut.

Campanula rapunculoides, *Lin. S. P.* 234.
Campanula rigida, *Stokes Bot. M. M.* 333.
Campanula morifolia, *Salisb. Prod.* 126.

Woods; perennial; August.

Lower leaves petioled; upper sessile; *bracteæ* small; *flower* blue; *fruit* drooping.

8. *Campanula urticifolia.* *Nettle-leaf bellflower.*

Stem angular; *leaves* deeply serrated, very rough; upper leaves ovate-lanceolate; lower leaves heartshape; *peduncles* axillary, few-flowered; *fruit* drooping.

Campanula vulgatior foliis urticæ vel major et asperior, *Raii Syn.* 276, 2.
Trachelium majus, *Ger. em.* 448, 1.
Trachelium majus flore purpureo, *Park. Par.* 355.
Campanula Trachelium, *Lin. S. P.* 235.
Campanula urticifolia, *Salisb. Prodr.* 127.
Great throat-wort. Canterbury bells. Coventry bells.

Woods and hedges; perennial; July.

Angles of the stem rather winged, juice yellow; *calyx* usually rough; *corolla* blue or pale red, sometimes double; inside hairy.

9. *Campanula glomerata.* *Ball bellflower.*

Stem angular, simple; *leaves* ovate, crenulated, hairy; upper leaves embracing the stem; *flowers* terminal, sessile, in heads.

Campanula pratensis flore conglomerato, *Raii Syn.* 277, 3.
Trachelium minus, *Ger. em.* 449, 4; *Park.* 644.
Campanula glomerata, *Lin. S. P.* 235.
Small Canterbury bells.

Chalky fields; perennial; July and August.

Root woody; *lower leaves* nearly heartshape; *bracteæ* oval, coloured; *lobes* of the calyx hairy; *corolla* blue or white, viscid, hairy.

β. *minor.* *Stem* scarcely two inches high.

II. 172. LEGOUSIA. Durande. *Venus'-looking-glass.*

Calyx 5-parted; *corolla* rotate, tube very short; limb 5-cut; lobes reverse-heartshape; *stamens* 5; *anthers* distinct; *filaments* very short, not dilated; *stigma* 2 or 3-cut; *capsule* columnar, prismatic or cylindrical; 2 or 3-celled, many-seeded. — *Stem* herbaceous; *leaves* sessile; *flowers* axillary, sessile, blue or white.

1. *Legousia parviflora.* *Small-flowered Venus'-looking-glass.*

Stem stiff, straight, slightly branched at bottom; *leaves* oblong, waved, crenate; *flowers* solitary; *corolla* shorter than the calyx.

Campanula arvensis erecta, vel Speculum Veneris minus, *Raii Syn.* 278, 1.
Speculum Veneris minus, *Ger. em.* 439, 2; *Park.* 1331.
Campanula hybrida, *Lin. S. P.* 239.
Prismatocarpus confertus, *Mœnch Meth.* 496.
Prismatocarpus hybridus, *De Cand. Fl. Gall.* 2857.
Codded corn-violet. Lesser Venus' looking-glass.

Chalky fields; annual; August.

Root fibrous; *stem* angular, edges rough; *corolla* violet.

2. *Legousia arvensis.* *Field Venus'-looking-glass.*

Stem very much branched, diffuse; *leaves* oblong, crenate; *flowers* solitary; *corolla* spread open, equal to the lobes of the calyx.

Speculum Veneris, *Ger. em.* 439, 1.
Campanula Speculum, *Lin. S. P.* 239.
Legousia arvensis, *Durande Fl. Burg.* 1, 37.
Prismatocarpus Speculum, *De Cand. Fl. Gall.* 2856.
Campanula pulchella, *Salisb. Prod.* 127.
Corn gilliflower. Corn pink.

Chalky fields, dunghills; annual; July and August.

III. 173. PHYTEUMA. Dioscorides. *Horned-rampions.*

Calyx 5-cut; *corolla* at first round, concave, then 5-parted; tube very short; lobes of the limb linear, loose; *stamens* 5; *anthers* distinct; *stigma* 3-cut; *capsule* 2 or 3-celled, opening by lateral pores.—*Stem* mostly simple; *flowers* in close heads or terminal spikes; *bracteæ* 1 to each flower.

Phyteuma orbiculare. *Round-headed horned rampions.*

Root-leaves ovate-heartshape; upper leaves oblong, lanceolate, serrate; *flowers* in a roundish head; *bracteæ* ovate-lanceolate.

Rapunculus corniculatus montanus, *Raii Syn.* 278, 1; *Ger. em.* 455, 5.
Rapunculus alopecuroides orbiculatus, *Park.* 648.
Phyteuma orbiculare, *Lin. S. P.* 242.
Mountain horned-rampions.

Pastures and waysides in chalky soils; peren.; August.

Root woody; *leaves* fringed; *heads* many-flowered; *bracteæ* enlarges after flowering; *flowers* violet or rarely white.

IV. 174. JASIONE. Theophrastus. *Sheeps' scabious.*

Calyx 5-cut; *corolla* rotate; tube very short; limb 5-lobed; lobes long, linear, loose; *stamens* 5; *anthers* grown together at bottom into a tube; *stigma* clubshape, nicked; *capsule* half 2-celled, opening at the tip by a pore; spermophore free; *seeds* many.—*Stem* mostly simple; *flowers* pedicelled, in heads; *central* flowers often abortive; *involucrum* many-leaved; receptacle naked.

Jasione montana. *Mountain sheeps' scabious.*

Leaves linear, lanceolate, slender at bottom, hispid, waved, crisp.

Rapunculus scabiosæ capitulo cæruleo, *Raii Syn.* 278, 2; *Park.* 646.
Scabiosa minima hirsuta, *Ger. em.* 723, 12.
Jasione montana, *Lin. S. P.* 1317.
Jasione undulata, *Lamarck Enc. Meth.* 3, 215.
Sheeps' bit. Hairy sheeps' scabious.

Sandy pastures; annual; June and July.

Root woody; *stems* many, round, slightly branched; *root-leaves* large; *flowers* blue.

B. Lobeliæ. *Flowers* irregular, cut deepest on the lower side, generally become resupinate; *stigma* bearded, completely formed before the anthers burst.

V. 175. LOBELIA. Plumier. *Lobel.*

Calyx 5-toothed; *corolla* irregular, becoming resupinate, deeply cut below, 3-lobed above; *stamens* 5; *filaments* distinct; *anthers* connected into a tube, bearded at the top; *stigma* nicked; *capsule* 2-celled. — *Stem* upright; *leaves* often radical; *flowers* peduncled, in racemes; *bractea* 1 at the base of each peduncle; *juice* milky.

1. *Lobelia lacustris.* *Lake lobel.*

Leaves mostly radical, linear, 2-celled, not in the least cut; *scape* simple, nearly naked, few-flowered, racemose.

Gladiolus lacustris Dortmanni, *Raii Syn.* 287 *, 1.
Gladiolus lacustris, *Ger. em.* 105, 4.
Gladiolus lacustris Clusii, sive leucojum palustre, flore subcæruleo Bauhini, *Park.* 1250.
Lobelia Dortmanni, *Lin. S. P.* 1310.
Lobelia lacustris, *Salisb. Prod.*
Water sword-flag.

Lakes; perennial; July.

Root white; *stem* round, hollow; *leaves* all under water, bent back; *flowers* drooping, blue; *bracteæ* ovate, short; *lobes* of the calyx shorter than the tube of the corolla.

2. *Lobelia urens.* *Stinging lobel.*

Stem rather erect; *lower leaves* reverse-ovate, denticulated; upper leaves lanceolate, serrate; *flowers* in racemes.

Lobelia urens, *Lin. S. P.* 1321.
Lobelia verbenæfolia, *Salisb. Prod.* 129.

Mountainous meadows; peren.; August and September.

Root fibrous; *stem* branched, bluntly angular, rather leafy; *racemes* many-flowered; *flowers* 1-rowed, violet; *bracteæ* bristleshape, rough; *lobes* of the calyx retuse, as long as the tube.—Plant acrid, especially the root.

Fam. IV. 39. COMPOSITÆ.

Flowers collected into a calathide seated on a clinanthus: *calathide* girt with a pericline composed of many scales, in a single, double, or multiple series; scales mostly free, sometimes soldered; *pericline* often surrounded with an involucrum of many verticillate bracteæ attached to the base; *clinanthus* naked or with appendices, flat or convex; *calathide* of 1, 2, or 3 sorts of flowers, mostly solitary, some-

times formed into a calathiphore.—*Calyx* very thin, adherent to the ovary; apex simple or pappose; *corolla* situated on a gland at the top of the ovary, 5-lobed; lobes (or rather soldered petals) having a simple rib on each side meeting at the tip; æstivation valvular; *stamens* 5; *filaments* inserted into the corolla, attached to it at the base, alternating with the lobes, formed of two joints, upper joint very short; *anthers* 2-celled, 4-valved, opening lengthways, soldered together by the outer valves into a tube; *ovary* mostly pedicelled, simple, 3-celled; ovules 3; *style* 1, 2-cut; *stigmata* 2, on the inner faces of the lobes of the style; collectors 2, on the outer faces; *akenium* 1-seeded by abortion, naked or pappose; pappi scaly, hairy or feathery; *seeds* upright; spermodermis very thin; perisperm 0, or very thin; corculum straight; radicle below; cotyledons flat.—*Stem* herbaceous; *leaves* mostly alternate.

A. CICHORACEÆ. *Flowers* all ligulate, hermaphrodite; *clinanthus* scarcely fleshy; *stigmata* papillous on the whole inner faces of the branches; *collectors* hairy on the whole outer faces of the branches and upper part of the style.—*Plant* mostly lactescent; *leaves* alternate; *flowers* yellow, rarely blue, often meteoric.

a. *Pappus* 0, *or chaffy; scales of the pericline in a single row; involucrum small.*

Pappus 0; *clinanthus* naked ..... LAPSANA. 176.
Pappus marginal, not cut;
clinanthus naked ..... ARNOSERIS. 177.
Pappus chaffy; chaffs 5 or many .... CICHORIUM. 193.

b. *Pappus hairlike or bristlelike, sessile; pericline imbricate.*

Pappus very soft; *akenium* compressed;
pericline bellied, imbricate ..... SONCHUS. 181.
Pappus denticulate; *akenium* roundish;
pericline ovate, imbricate..... HIERACIUM. 182.
Pappus snow-white; *akenium* streaked;
pericline simple; *calathide* many-flowered .. CREPIS. 183.
Pappus snow-white; *akenium* streaked;
pericline simple; *calath.* 4 or 5-flowered PRENANTHES. 179.

c. *Pappus hairlike, stipitated; scales of the pericline imbricate.*

Pappus unequal; *pericline* becoming
torulose ..... BARKHAUSIA. 184.

d. *Pappus hairlike, stipitated; scales of the pericline in a single row.*

Bracteæ many, loose ..... TARAXACUM. 185.
Bracteæ few; *pericline* cylindrical;
calathide many-flowered ..... LACTUCA. 180.
Bracteæ few; *pericline* cylindrical;
calathide 5-flowered ..... CHONDRILLA. 178.

e. *Pappus feathered, sessile; clinanthus naked; pericline imbricated.*

Akenium streaked lengthways;
pappus unequal ..... THRICA. 188.
Akenium streaked lengthways; *pappus* of
the circumference unequal, scaly ..... VIREA. 189.
Akenium wrinkled transversely ..... PICRIS. 190.

f. *Pappus feathered, stipitate; clinanthus naked; scales of the pericline one-rowed.*

Akenium wrinkled transversely;
involucrum 5-bracteated ..... HELMINTHIA. 191.
Akenium streaked lengthways;
involucrum 0 ..... TRAGOPOGON. 192.

g. *Pappus feathered; clinanthus chaffy; pericline imbricate.*

Pappi all stipitate ..... ACHYROPHORUS. 186.
Pappus of the centre stipitate; of
the circumference sessile ..... HYPOCHÆRIS. 187.

I. 176. LAPSANA. Dioscorides. *Nipplewort.*

Bracteæ 4 or 5, very short; *pericline-scales* 8, in a single row, upright, connivent; *clinanthus* bald, flat, with depressed papillæ; *flowers* many; *akenium* oblong, angular, streaked, deciduous; *pappus* 0.

Lapsana communis. *Common nipplewort.*

Stem upright, streaked, branched; *leaves* ovate, petioled, angularly toothed; *peduncles* thin, much branched; *pericline* when in fruit angular.

Lampsana, *Raii Syn.* 173, 1; *Ger. em.* 255.
Lampsana vulgaris, *Park.* 810.
Lapsana communis, *Lin. S. P.* 1141.
Dock cresses.

Ruins and fields; annual; June and July.

Root branched; *stem* rather bald; *root-leaves* lyrate; stem-leaves ovate; *floral-leaf* linear, lanceolate, 1 at the; base of each peduncle.—Eaten at Constantinople just before flowering as a salad; and used in Prussia to cure ulcerated breasts.

II. 177. ARNOSERIS. Gærtner. *Swine's-succory.*

Bracteæ very few, small; *pericline* becoming torulose and connivent into a globe; scales many, equal, single-rowed, acutely keeled; *clinanthus* bald, flat, with hollow dots; *akenium* angular, furrowed; *pappus* marginal, leathery, 5-sided, not toothed. — *Leaves* radical; *scape* thickened above.

Arnoseris pusilla. *Dwarf swine's-succory.*

Scape 1 to 3-flowered; *leaves* ovate, oblong, denticulate; *peduncles* fistulous, clubshape, thickened above.

Hieracium minimum Clusii, Hyoseris Tabermontani et Gerardi, *Raii Syn.* 173, 1; *Park.* 791.
Hyoseris mascula, *Ger. em.* 288, 8.
Hyoseris minima, *Lin. S. P.* 1138.
Arnoseris pusilla, *Gærtner Sem. et Fr.* 2, 355.

Sandy fields; annual; June.

Root fusiform; *leaves* toothed; *stem* upright, bald, very thin at bottom, thicker above; *corolla* yellow.

III. 178. CHONDRILLA. Dioscorides. *Gum-succory.*

Bracteæ few, short; *pericline* cylindrical; scales 8 or 10, membranaceous at the edge, equal; *clinanthus* bald, hollowed, dotted; *flowers* 5 or 6, in one row; *akenium* ovate, compressed, streaked, rather rough; *pappus* stipitate, very soft, snow-white, fugacious.—*Leaves* radical and cauline; *flowers* diversely panicled, yellow.

Chondrilla muralis. *Wall gum-succory.*

Leaves lyrate, pinnatifid, toothed, terminal lobe 5-angular; *pappus* stipitate; stipes shorter than the akenium; *clinanthus* diversely panicled.

Lactuca sylvestris murorum flore luteo, *Raii Syn.* 162, 5.
Sonchus lævis muralis, *Ger. em.* 293, 5.
Sonchus lævis alter parvis floribus, *Park.* 805.
Prenanthes muralis, *Lin. S. P.* 1121.
Chondrilla muralis, *Lamarck. Fl. Fr.*
Ivy-leaved sow-thistle. Wall sow-thistle.

Walls and close woods; perennial; July.

Root woody; *stem* round, upright; *radical leaves* petioled; panicle divaricated; *flowers* bracteated, yellow.

β. integrifolia. Upper leaves not cut.

IV. 179. PRENANTHES. Vaillant. *Prenanth.*

Bracteæ few, short; *pericline* cylindrical; scales 8 or 10, equal, membranaceous at the edge; *clinanthus* with hollow dots, bald; *flowers* 5 or 6 in one series; *akenium* ovate, compressed, streaked, rather rough; *pappus* sessile, very soft, snow-white, fugacious.—*Leaves* radical and cauline; *flowers* divaricatedly panicled, yellow or purple.

Prenanthes pulchra. *Handsome prenanth.*

Leaves rather rough; root-leaves runcinate; stem-leaves embracing the stem, ovate, lanceolate, arrowlike at the base; *panicle* corymbosely divaricated, naked.

Crepis pulchra, *Lin. S. P.* 1134.
Lapsana pulchra, *Vill. Dauph.* 3, 163.
Chondrilla pulchra, *Lamarck Encl. Meth.* 277.
Prenanthes hieraciifolia, *Willd. S. P.* 3, 1541.
Prenanthes pulchra, *Mœnch Meth.* 534.

Alpine rocks; annual; June to September.

Stem slender, spreading; *flowers* small, yellow; *pericline* pyramidical, bald.

V. 180. LACTUCA. Pliny. *Lettuce.*

Bracteæ 8 or 10, unequal, pointed; *pericline* cylindrical; scales 8, membranaceous at the edge, pointed; *clinanthus* flat, bald, with hollow dots; *calathide* many-flowered, 7-rowed; *akenium* ovate, attenuated, compressed, streaked lengthways; *pappus* stipitate, very soft, hairlike, fugacious.—*Stem* mostly prickly.

1. *Lactuca sativa.* *Cultivated lettuce.*

Root-leaves oblong, lanceolate, toothed at the edge; stem-leaves heartshape; *flowers* corymbose.

Lactuca sativa, *Ger. em.* 306, 1; *Lin. S. P.* 1118.
Coss Lettuce.

Cultivated for a potherb and salad; annual; June, Sept.

Lower leaves spreading, oblong, wrinkled; *akenium* white; *pappus-stipes* little shorter than the akenium.—*Leaves* narcotic; if eaten in large quantities laxative, especially if boiled.

β. *planifolia.* *Lower leaves* flat, lanceolate, oblong; upper leaves ovate, arrowshape; *akenia* black.

Lactuca intybacea, *Ger. em.* 307, 6.
Lactuca angustifolia, *Lamarck Encycl. Meth.* 3, 402.
Italian coss-lettuce. Endive-leaved lettuce.

γ. *capitata.* *Lower leaves* curled, wrinkled, slightly sinuated, ribbed at bottom; upper leaves oblong, arrowshape.

Lactuca capitata, *Ger. em.* 307, 5.
Lactuca angustifolia, *Lamarck Encycl. Meth.* 3, 402.
Cabbage-lettuce.

δ. *crispa.* *Lower leaves* rounded, ovate, wrinkled, sinuately lobed, keel hairy; upper leaves oblong, arrowshape, sinuately toothed.

Lactuca crispa, *Ger. em.* 306, 2.
Curled-leaf lettuce.

All the varieties are cultivated extensively.

2. *Lactuca sylvestris.* *Wild lettuce.*

Leaves sinuately pinnatifid, embracing the stem, vertical; keel prickly; tip pointed; *flowers* loosely panicled.

Lactuca sylvestris costa spinosa, *Raii Syn.* 161, 2.
Lactuca sylvestris foliis dissectis, *Ger. em.* 309, 3.
Lactuca sylvestris laciniata, *Park* 814.
Lactuca scariola, *Lin. S. P.* 1119.
Lactuca sylvestris, *Lamarck Enc. Meth.* 3, 406.
Mild-scented cut-leaved wild lettuce.

Edges of fields on chalky soils; annual? August.

Herb glaucous; *bracteæ* heartshape, pointed; *flowers* lemon yellow.

3. *Lactuca virosa.* *Strong-scented lettuce.*

Leaves oblong, denticulate, horizontal; keel prickly; tip blunt.

Lactuca sylvestris major odore opii, *Raii Syn.* 161, 1: *Ger. em.* 309, 1.
Lactuca sylvestris endiviæ foliis, odore viroso, *Park.* 813.
Lactuca virosa, *Lin. S. P.* 1119.
Cut lettuce.

Chalky soils; biennial; August and September.

Stem rod-like, 6 feet high, panicled above; *leaves* glaucous, radical, many, reverse-ovate, undivided; *flowers* sulphur-colour, scarcely longer than the pericline.—*Juice* inspissated is narcotic.

β. *integrifolia.* *Leaves* not cut.

Lactuca sylvestris, folio non laciniato, *Raii Syn.* 162, 3.

4. *Lactuca minima.* *Least lettuce.*

Root-leaves lanceolate, pinnatifid; stem-leaves hastate, linear, sessile, not cut; *flowers* racemose.

Lactuca sylvestris minima, *Raii Syn.* 263, 3.
Chondrilla viscosa humilis, *Ger. em.* 287, 5 *; *Park.* 783.
Lactuca saligna, *Lin. S. P.* 1119.

Chalky soils; biennial or annual; August.

Stem tough, rushlike, branched; *leaves* keeled, spinous or smooth; *bracteæ* arrowshape.

VI. 181. SONCHUS. Theophrastus. *Sowthistle.*

Pericline imbricate, becoming connivent, ventricose at bottom; scales many, unequal, in 2 or 3 series; *clinanthus* flat, with hollow dots, bald; *calathides* many-flowered; *akenium* compressed, streaked lengthways; *pappus* hair-like, sessile, very soft, fugacious.—*Stem* fistulous, milky; *leaves* runcinate, sessile; *flowers* racemose or panicled.

a. *Flowers blue; pappus rough.*

1. *Sonchus alpinus.* *Alpine sowthistle.*

Flowers racemose, bracteated; *peduncles* and *pericline* hirsute; *leaves* rather lyrate; terminal lobes deltoid, angular, bald, glaucous beneath.

Sonchus flore cæruleo, *Ger. em.* 294, 7.
Sonchus Canadensis, *Lin. S. P.* 1115.
Sonchus alpinus, *Huds. Fl. Angl.* 336, not of Linnæus.
Sonchus cæruleus, *Camer. Epit.* 281.
Sonchus montanus, *Lamarck Enc. Meth.* 401.
Hieracium cæruleum, *Scopoli Carn.* 976.
Blue-flowered sowthistle.

Alpine pastures; perennial; July and August.

Root fleshy; *stem* 3 feet high, simple; *leaves* smooth, upper leaves linear, fringed; *racemes* solitary; *bracteæ* linear; *calathide* twice as long as the pericline; *anthers* red.

b. *Flowers yellow; pappus soft.*

2. *Sonchus palustris.* *Marsh sowthistle.*

Flowers many, panicled; *peduncles* and *pericline* glandularly hispid; *leaves* runcinate, arrowshape at bottom, edge rough.

Sonchus tricubitalis, folio cuspidato, *Raii Syn.* 163, 8.
Sonchus arborescens alter, *Ger. em.* 294, 9.
Sonchus palustris, *Lin. S. P.* 1116.
Great tree sowthistle.

Stem 8 feet high, pipey; *leaves* pointed, bald; *panicle* many-flowered; *pericline* black.

3. *Sonchus arvensis.* *Field sowthistle.*

Root creeping; *leaves* runcinate, heartshape at the base, doubly fringed; *peduncles* and *pericline* hispid; *calathides* few, panicled.

Sonchus repens, multis hieracium majus, *Raii Syn.* 163, 7.
Sonchus arborescens, *Ger. em.* 294, 8.
Sonchus arvensis, *Lin. S. P.* 1116.
Tree sowthistle.

Clay-fields and woods; perennial; August.

Root milky; *stem* 4 feet high; *calathides* very large; *flowers* yellow.

4. *Sonchus oleraceus.* *Kitchen-garden sowthistle.*

Leaves oblong, lanceolate, embracing the stem, slightly sinuated; edge fringed; *peduncles* rather nappy; *pericline* bald; *calathides* panicled.

Sonchus lævis, *Raii Syn.* 162, 1; *Ger. em.* 292, 3.
Sonchus lævis vulgaris, *Park.* 805.
Sonchus oleraceus, *Lin. S. P.* 1116.
Sonchus ciliatus, *Lamarck Fl. Gall.* 287.
Hares' lettuce. Smooth thistle.

Cultivated places; annual; July to September.

Root fusiform; *stem* much branched; *leaves* bald; *peduncles* white; wool deciduous.—*Herb* much sought after by hares and rabbits; gathered for tame ones; used by some as a potherb and in salads.

β. *latifolius.* *Leaves* broad.

Sonchus lævis minor, paucioribus laciniis, *Raii Syn.* 163, 2.
Sonchus lævis latifoliis, *Ger. em.* 292, 4.

γ. *laciniatus.* *Leaves* sinuated more than usual.

Sonchus asper laciniatus, *Raii Syn.* 163, 3; *Park.* 804.
Sonchus asperior, *Ger. em.* 291, 2.

δ. *integrifolius.* *Leaves* not sinuated.

Sonchus asper non laciniatus, *Raii Syn.* 163, 4.
Sonchus asper, *Ger. em.* 291, 1.
Sonchus asper major non laciniatus, *Park.* 803.

ε. *subrotundus.* *Leaves* roundish.

Sonchus subrotundo folio nostras, lævissimis spinulis circa foliorum oras exasperatus, *Dillen in Raii Syn.* 163, 5.

ζ. *angustifolius.* *Leaves* narrow, oblong, very thorny on the edges.

Sonchus ἀφυλλόκαυλος angusto et oblongo folio nostras, per foliorum ambitum creberrimis spinulis asperatus, *Dillen in Raii Syn.* 163, 7.

VII. 182. HIERACIUM. Dioscorides. *Hawkweed.*

Pericline becoming ovate; scales many, linear, oblong, imbricate; *clinanthus* rather flat, scrobiculate, roughish, becoming rather globose, papillose; *calathide* many-flowered; *akenium* angular, furrowed; *pappus* sessile, bristle-like, denticulated, stiff, persisting, greyish.

a. Leontideæ. *Leaves radical, rather bald, not glaucous or coriaceous; scape naked; calathides solitary, or few.*

1. *Hieracium alpinum.* *Alpine hawkweed.*

Leaves lanceolate, oblong, pointed, villous; edge whole or denticulated; *scape* rather naked, villous; *calathide* solitary; *pericline* very villous.

Hieracium (Pulmonaria) villosum alpinum flore magno singulari, caule nudo, *Raii Syn.* 169, 10.
Hieracium alpinum, *Lin. S. P.* 1124.
Welsh mouse-ear.

Alpine rocks; perennial; July.

Scape solitary, simple, with a lanceolate leaf in the middle; *calathide* upright; *pericline* black; *flowers* golden yellow.

2. *Hieracium aurantiacum.* *Orange hawkweed.*

Leaves oblong, pointed, hairy, hispid, not cut; *scape* leafy at bottom, hispid; *calathides* corymbose; *peduncles* conglomerate.

Hieracium hortense latifolium, sive pilosella major, *Ger. em.* 305, 3.
Hieracium aurantiacum, *Lin. S. P.*
Grim the collier. Golden mouse-ear.

Alpine woods; perennial; June and July.

Stolones creeping; *scapes* with one or two leaves about the middle; *flowers* dark brownish orange colour.

b. Andryaloideæ. *Plant hairy; hairs long, white, jointed, somewhat plumose; stem leafy; pappus very rough.*

3. *Hieracium villosum.* *Villous hawkweed.*

Stem upright, rather branchy, villous; *leaves* repand; toothed, villous; root-leaves oblong, lanceolate; stem-leaves ovate, embracing the stem; *pericline* open, very villous.

Hieracium quintum Clusii, *Ger. em.* 301, 2.
Hieracium villosum, *Lin. S. P.* 1130.

Damp alpine woods; perennial; August.

Stem simple, 1-flowered, or branchy, many-flowered, 2 feet high; *leaves* rather glaucous; *calathides* terminal; *flowers* lemon-colour.

4. *Hieracium Lawsonii.* *Lawson's hawkweed.*

Stem branchy; *leaves* elliptical, lanceolate, decurrent, glaucous, scarcely cut, fringed; stem-leaves few; *pericline* glandular hairy.

Hieracium Lawsonii, *Villars Delph.* 3, 118.
Hieracium saxatilis β, *De Cand. Fl. Gall.*

North of England; perennial; July.

Stem spread open; *calathides* very large; *flowers* dark citron-colour.

c. Pilosellæ. *Stolones creeping, leafy; leaves inclining to glaucous; rather leathery, hirsute especially on the edge; hairs spreading, long, white, stiff; scape naked, or* 1*-leafed.*

5. *Hieracium repens.* *Creeping hawkweed.*

Stolones creeping, leafy; *leaves* ovate, not cut, nappy beneath; *scape* naked; *calathide* solitary, terminal.

Pilosella repens, *Raii Syn.* 170, 1; *Ger. em.* 638, 2.
Pilosella minor vulgaris repens, *Park.* 690.
Hieracium Pilosella, *Lin. S. P.* 1125.
Creeping mouse-ear.

Dry pastures; perennial; June and July.

Stolones hairy; *leaves* obtuse, above light green, beneath white; *hairs* of the pericline white and black; *flowers* lemon yellow; outer before opening streaked with purplish red.

6. *Hieracium multiflorum.* *Many-flowered hawkweed.*

Stolones creeping, leafy; *leaves* lanceolate, naked beneath, not cut; *scape* mostly naked; *calathides* panicled, terminal, rarely solitary.

Hieracium Auricula, *Lin. S. P.* 1126.
Hieracium dubium, *Fl. Danica*, 1044.

Mountains; perennial; July and August.

Scape upright, naked or with a leaf about the middle; *calathides* 3 or 6; *flowers* yellow.

7. *Hieracium dubium.* *Doubtful hawkweed.*

Stolones creeping, leafy; *leaves* elliptical, lanceolate, hispid, woolly beneath, edge scarcely cut; *scape* naked; *calathides* 2 to 6, terminal.

Hieracium dubium, *Lin. S. P.* 1125.
Hieracium Auricula, *Fl. Danica*, 1111.

Damp mountains; perennial; July and August.
Leaves rarely toothed; *peduncles* alternate, nappy; *flowers* lemon-yellow on both sides.

d. Pulmonariæ. *Stem leafy; pericline hairy; hairs black.*

8. *Hieracium murorum.* *Wall hawkweed.*
Stem mostly simple, few-leaved; *leaves* ovate, nearly heartshape at the base, villous beneath, toothed; teeth radiating; *calathides* panicled.

Hieracium (Pulmonaria) murorum folio pilosissimo, *Raii Syn.* 168, 6.
Pulmonaria Gallica, sive aurea latifolia, *Ger. em.* 304, 1.
Hieracium murorum Bauhini, quod est pulmonaria Gallorum Lobelii, *Park.* 801.
Hieracium murorum α, *Lin. S. P.* 1128.
Hieracium murorum, *Smith Lin. Trans.* 9, 236.
Hieracium murorum β, *Smith Fl. Brit.* 830.
French lungwort. Broad-leaved golden lungwort.

Walls and cliffs; perennial; May and June.
Stem furrowed; *root-leaves* many, roundish ovate; *calathides* large, yellow.

β. *laciniatum.* *Leaves* jagged, slightly hairy.

9. *Hieracium maculatum.* *Spotted-leaf hawkweed.*
Stem fistulous, many-leaved; *leaves* ovate, lanceolate, toothed; teeth bending forwards; *calathides* cymose.

Hieracium (Pulmonaria) λεπτόχαυλον hirsutum, folio longiore, *Raii Syn.* 169, 9.
Hieracium murorum γ, *Smith Fl. Brit.* 830.
Hieracium maculatum, *Engl. Bot.* 2121.

Rocks and mountains; perennial; July.
Stem 4 feet high; *leaves* dark green, strongly speckled with black, elliptical, rather heartshape.

10. *Hieracium sylvaticum.* *Wood hawkweed.*
Stem many-leaved; *leaves* ovate, lanceolate, toothed at the base; teeth bending forwards; *calathides* panicled.

Hieracium Pulmonaria dictum, angustifolium, *Raii Syn.* 168, 7.
Pulmonaria Gallica, sive aurea angustifolia, *Ger. em.* 304, 2.
Hieracium murorum, *Lin. S. P.* 1128.
Narrow-leaved French lungwort. Narrow-leaved golden lungwort.

Chalky woods and walls; perennial; July and August.
Leaves pale grass-green; *flowers* lemon-coloured.

β. *maculatum.* *Stem* tall, strong; *leaves* dark green, elegantly speckled with black.; *calathides* very numerous.
Hieracium sylvaticum β, *Smith Linn. Trans.* 9, 241.

11. *Hieracium pulmonarium.* *Lung hawkweed.*

Stem solid, few-leaved; *leaves* lanceolate, toothed; teeth broad, bent forward; *calathides* cymose.

Hieracium pulmonarium, *Engl. Bot.* 33, 2307.
Hieracium pulmonarioides, *Villars Delph.* 3, 135.

Rocks; perennial; July.

Stem-leaves 1 or 2, near the bottom; root-leaves many, spotted with brown; *calathides* large, lemon-colour.

12. *Hieracium paludosum.* *Marsh hawkweed.*

Stem fistulous; *leaves* heartshape, stem-clasping, toothed, bald; *calathides* panicled; *periclines* hispid.

Hieracium montanum cichorei folio nostras, *Raii Syn.* 166, 11.
Hieracium montanum latifolium minus, *Ger. em.* 300, 11.
Hieracium paludosum, *Lin. S. P.* 1129.

Alpine pastures; perennial; July.

Stem 3 feet high; *leaves* ovate, pointed; lower leaves sometimes lyrate; *calathides* rather corymbose; *flowers* yellow.—*Herb* intensely bitter.

13. *Hieracium molle.* *Soft-leaved hawkweed.*

Stem fistulous; *leaves* lanceolate, hairy, slightly toothed, embracing the stem; lower leaves petioled; *calathides* panicled; *peduncles* downy.

Hieracium molle, *Jacquin Aust.* 119.

Woods in Scotland; perennial; July and August.

Stem 18 inches high; *leaves* blunt; *hairs* short.

14. *Hieracium cerinthoides.* *Honeywort hawkweed.*

Stem solid; *leaves* hirsute, slightly denticulated; root-leaves ovate, decurrent; upper leaves oblong, slightly stem-clasping; *calathides* corymbose.

Hieracium cerinthoides, *Lin. S. P.* 1129.

Rocks; perennial; August.

Stem upright, villous; *leaves* rather glaucous, smooth above; *pericline* hirsute.

15. *Hieracium Sabaudum.* *Savoy hawkweed.*

Stem mostly simple, upright; *leaves* ovate, lanceolate, toothed-serrate, slightly embracing the stem, beneath rough; *calathides* corymbose.

Hieracium (Pulmonaria) fruticosum latifolium hirsutum, *Raii Syn.* 167, 1; *Park.* 802.
Hieracium Sabaudum, *Lin. S. P.* 1131.

Woods and hedges; perennial; August and September.

Stem rough, spongy inside; *leaves* pointed, beneath pale; *flowers* golden yellow.

β. *glabrum.* *Leaves* very slightly downy.

Hieracium (Pulmonaria) fruticosum latifolium glabrum, *Raii Syn.* 168, 2, *Park.* 801.

γ. *humile.* *Leaves* long, rarely toothed; *calathides* solitary.

Hieracium (Pulmonaria), q. hieracii seu pilosellæ majoris species humilis, foliis longioribus, rarius dentatis plurimis simul flore singulari nostras, *Raii Syn.* 170, 14.

δ. *latifolium.* *Leaves* broad, lanceolate; *pedicells* very short.

16. *Hieracium umbellatum.* *Umbelled hawkweed.*

Stem mostly simple, upright; *leaves* linear, slightly toothed, spreading; *calathides* corymbose, umbelled.

Hieracium (Pulmonaria) fruticosum angustifolium majus, *Raii Syn.* 168, 3; *Park.* 801.
Hieracium intybaceum, *Ger. em.* 298, 5.
Hieracium umbellatum, *Lin. S. P.* 1131.
Endive hawkweed.

Woods; perennial; August and September.

Stem 3 feet high; *leaves* many, sessile, green on both sides, rough; *calathides* large; *flowers* golden yellow.

β. *glabrum.* *Stem* and *leaves* smooth.

Hieracium q. Pulmonaria angustifolia glabra, *Dillen in Raii Syn.* 168, 4.

γ. *gramineum.* *Leaves* very narrow, not in the least cut.

Hieracium q. Pulmonaria graminea, *Dillen in Raii Syn*, 168, 5.

17. *Hieracium prenanthoides.* *Prenanthes hawkweed.*

Stem upright; *leaves* embracing the stem; slightly toothed, edge rough; lower leaves oblong; *calathides* many, panicled; *peduncles* nappy.

Hieracium spicatum, *Allioni Pedem.*
Hieracium prenanthoides, *Villars Delph.* 3, 108.

Alpine mountains; perennial; July to September.

Stem 3 feet high, many-leaved.

18. *Hieracium denticulatum.* *Toothed hawkweed.*

Stem upright; *leaves* sessile, elliptical, lanceolate, denticulated, rather bald, beneath glaucous; *calathides* many, panicled; *peduncles* nappy.

Hieracium Kalmii, *Symons Syn.* 173.
Hieracium prenanthoides, *Smith Fl. Brit.* 835.

Alpine mountains; perennial; July to September.

Stem 3 feet high; *upper leaves* oval; *corolla* yellow; *seeds* very smooth.

VIII. 183. CREPIS. Pliny. *Hawks-beard.*

Involucrum patulous; scales many, falling off; *pericline* becoming torulous bellied; scales many, in one series; *clinanthus* flat, pitted; pitts fringed on the edge; *akenium* streaked; *pappus* sessile, hairlike, rough, white, falling off.

1. *Crepis tectorum.* *Roof hawks-beard.*

Leaves rather bald; root-leaves lanceolate, runcinate, lobes ascending; upper leaves linear, threadlike, arrow-shape, toothed, embracing the stem; *calathides* corymbose; *pericline* downy.

Hieracium luteum glabrum, sive minus hirsutum, *Raii Syn.* 165, 9.
Hieracium Aphacoides, *Ger. em.* 297, 4.
Cichoreum pratense luteum lævius, *Park.* 778.
Crepis tectorum, *Lin. S. P.* 1135.
Hedypnois tectorum, *Huds. Fl. Angl.* 341.
Succory hawkweed.

Fields and pastures; annual; June to September.

Stem branched, mostly bald, rarely slightly hairy; *leaves* light green; *calathides* small; *corolla* yellow.

β. *attenuata.* *Leaves* tapering to a point.

γ. *integrifolia.* *Leaves* not cut, or very slightly toothed, lanceolate or ovate.

δ. *pilosa.* *Stem* hairy; *leaves* linear, very narrow.

2. *Crepis biennis.* *Biennial hawks-beard.*

Leaves hispid, runcinately pinnatifid; lobes ascending; upper leaves sessile, lanceolate, toothed; keel hispid, prickly; *pericline* downy, prickly.

Hieracium maximum chondrillæ folio asperum, *Raii Syn.* 166, 12.
Crepis biennis, *Lin. S. P.* 1136.
Hedypnois biennis, *Huds. Fl. Angl.* 342.

Chalky pastures; biennial; June and July.

Stem 4 feet high, rough; *lower leaves* petioled; upper leaves lanceolate, pinnated at the base; *calathides* large, corymbose; *corolla* yellow.

IX. 184. BARKHAUSIA. Mœnch. *Castor-weed.*

Bracteæ awlshape, short, weak; *pericline* becomes angular; scales nearly equal, in one series, become keeled and embrace the outermost akenia; *calathide* many-flowered; *clinanthus* rather flat, pitted; pitts fringed on the edge; *akenium* slender, furrowed, rough; *pappus* stipitate, hairy, rough; that of the circumference very short.

Barkhausia fœtida. *Stinking castor-weed.*

Stem hairy; *leaves* runcinately pinnatifid, rough, sessile; upper lanceolate, deeply cut at the base; *pericline* ovate, nappy.

Hieracium castorei odore Monspeliensium, *Raii Syn.* 165, 7.
Crepis fœtida, *Lin. S. P.* 1133.
Barkhausia fœtida, *Mœnch Meth.* 1133.
Picris fœtida, *Lamarck Fl. Fran.* 2, 108.

Dry chalky pastures; biennial; June and July.

Stem diffused, branched, hairy; *leaves* runcinate pinnatifid; end lobe very large, deltoid; *peduncles* 1-flowered, thicker at top; *corolla* yellow, reddish on the back.

X. 185. TARAXACUM. Lonicerus. *Dandelion.*

Bracteæ nearly equal, lanceolate, weak, in two series; *pericline* oblong; scales many, in one series, equal, lanceolate, edge membranaceous; *calathides* many-flowered; *clinanthus* flat, pitted, bald; *akenium* compressed, streaked lengthways; *pappus* hairlike, stipitated, falling off.—*Root* fusiform; *leaves* radical; *scape* naked, hollow; *calathides* solitary, large; *corollæ* yellow.

1. *Taraxacum officinale.* *Shop dandelion.*

Leaves runcinate, bald; lobes lanceolate, toothed; *bracteæ* reflexed.

Dens leonis, *Raii Syn.* 170, 1; *Ger. em.* 290, 1.
Dens leonis vulgaris, *Park.* 780.
Leontodon Taraxacum, *Lin. S. P.* 1122.
Leontodon Dens leonis, *Lamarck Enc. Meth.* 3, 349.
Taraxacum officinale, *Villars Dauph.* 3, 72.
Leontodon officinale, *Withering Bot. Arr. ed.* 4, 679.
Leontodon vulgare, *Lamarck Fl. Fran.* 2, 113.
Piss-a-bed.

Grass-lands and road-sides; perennial; Apr. to Sept.

Leaves light green; *calathides* large; *bracteæ* nearly as long as the pericline; *akenium* lemon-colour.—Blanched leaves and the roots used in salads, very diuretic; juice alterative.

β. angustifolium. Leaves narrow, deeply cut; *akenium* reddish.

Dens leonis angustioribus foliis, *Raii Syn.* 167, 2; *Park.* 780.

2. *Taraxacum Raii.* *Ray's dandelion.*

Leaves lanceolate, sinuately toothed, nearly bald; *bracteæ* short, upright, closely pressed.

Taraxacum erectum, *Hoffm. Germ.* 1, 270.
Leontodon Raii, *Gouan Illustr.* 55.
Leontodon lividum, *Willd. S. P.* 1545.
Leontodon salinum, *Pall. Pal.* 735.
Hedypnois paludosa, *Scop. Carn.* 2, 100.
Leontodon palustre, *Lyons Fasc.* 48.
Leontodon Taraxacon, *Withering Bot. Arr.* 679.
Marsh dandelion.

Fields and pastures; perennial; June and July.

Bracteæ pointed, much shorter than the pericline; *corolla* yellow.

XI. 186. ACHYROPHORUS. Scopoli. *Cats-ear.*

Pericline oblong; scales many, imbricated, keeled, muricated; *calathides* many-flowered; *clinanthus* rather convex, chaffy; chaffs linear, pointed, nearly as long as the pericline, falling off; *akenium* streaked; *pappus* stipitate, feathered; rays threadshape.

1. *Achyrophorus maculatus.* *Spotted cats-ear.*

Stem nearly naked; branches solitary; *leaves* ovate, oblong, rather toothed, often spotted.

Hieracium primum latifolium Clusii, *Raii Syn.* 167, 17; *Ger. em.* 301, 1.
Hypochæris maculata, *Lin. S. P.* 1140.
Achyrophorus maculatus, *Scop. Carn.* 986.

Chalky mountainous pastures; perennial; July.

Stem upright, hirsute; *root-leaves* rough; spots purple; *calathides* mostly solitary, large; *pericline* hairy; *corolla* golden.

2. *Achyrophorus radicatus.* *Long-rooted cats-ear.*

Stem branched, naked, smooth; *leaves* runcinate, blunt, rough; *peduncles* scaly.

Hieracium longius radicatum, *Raii Syn.* 165, 6; *Ger. em.* 298, 6; *Park.* 790.
Hypochæris radicata, *Lin. S. P.* 1140.
Achyrophorus radicata, *Scop. Carn.* 987.

Fields and pastures; perennial; June and August.

Root very long; *stems* many, 6 inches high, simple; *calathides* solitary, nearly sessile, on the side.

XII. 187. HYPOCHÆRIS. Theophrastus. *Cats-tongue.*

Pericline long, conical; scales many, imbricate, smooth, flat, tip coloured; *calathides* many-flowered; *clinanthus* flat, chaffy; chaff lanceolate, pointed, nearly as long as the

scales of the pericline, falling off; *akenium* streaked; *pappus* of the circumference sessile, in the centre pedicelled; rays threadlike.

Hypochæris glabra. *Smooth cats-tongue.*

Stem branched, naked; *leaves* radical, toothlike sinuated, bald.

Hieracium parvum in arenosis nascens, seminum pappis densius radiatis, *Raii Ryn.* 166, 14.
Hieracium glabrum, *Lin. S. P.* 1140.

Sandy gravelly places; annual; June to August.

Stem rarely simple, mostly branched, reclined; *leaves* shining, rarely fringed; *calathides* solitary, upright, small; *corolla* lemon yellow.

XIII. 188. THRICA. Roth. *Thrica.*

Bracteæ few, short; *pericline* 8-angled; scales and margin dilated at bottom; *calathides* many-flowered; *corolla* not glandular at the tip; mouth not hairy; *clinanthus* dotted; dots hollow; *akenia* of the circumference truncated at the tip, involved in the scales of the pericline; pappus chaffy; akenia of the centre long, slender, free; pappus sessile, feathered, rays unequal.—*Leaves* radical; *calathides* solitary, nodding before expansion; *outer flowers* of the calathide reddish.

1. *Thrica hirta.* *Hairy thrica.*

Leaves lanceolate, sinuately toothed, hairy; hairs simple; *calathides* solitary; *pericline* rather bald; scales pointed.

Hieracium pumilum saxatile asperum præmorsa radice, *Raii Syn.* 167, 16.
Leontodon hirsutum, *Lin. S. P.* 1123.
Hyoseris taraxacoides, *Lamarck Enc. Meth.* 3, 159.
Hyoseris hirta, *Gærtner Sem. et Fr.* 2, 373.
Thrica hirta, *Willd. Sp.* 3, 1555.
Hedypnois hispidum β, *Huds. Fl. Angl.* 340.
Hedypnois hirta, *Smith Fl. Brit.* 824.
Apargia hirta, *Smith Compend.* 116.

Heaths and commons; perennial; June to August.

2. *Thrica hispida.* *Bristly thrica.*

Leaves lanceolate, blunt, toothed, hairy; hairs forked; *calathides* solitary; *pericline* rather hoary, naked; scales hairy.

Hyoseris taraxacoides, *Villars Delph.* 3166.
Leontodon saxatile, *Lamarck Encyc. Meth.* 3, 531.
Thrica hispida, *Roth Catal. Bot.* 198.

Stony and sandy places; perennial; July and August.

XIV. 189. VIREA. Adanson. *Virey.*

Pericline ovate; scales many, imbricate, unequal, irregular; *calathides* many-flowered; *clinanthus* convex, rather hairy, with hollow dots, edge of the pits fringed; *akenium* streaked; *pappus* of the circumference sessile; rays chaffy and bristly, mixed, unequal; of the centre with unequal and featherlike rays.—*Leaves* mostly radical; *calathides* yellow.

a. Apargiæ. *Tube of the corolla hairy at the mouth; tip of the lobes glandular; scape simple.*

1. *Virea hispida.* *Bristly virey.*

Leaves pinnatifid, oblong, hirsute; hairs forked; *scape* simple, bald; *pericline* rather hirsute.

Dens leonis hirsutus λεπτόκαυλος, hieracium dictus, *Raii Syn.* 171, 3.
Hieracium dentis leonis folio hirsutum, *Ger. em.* 303, 6; figure not accurate.
Hieracium asperum foliis et floribus dentis leonis bulbosi, *Park.* 788; figure not accurate.
Leontodon hispidum, *Lin. S. P.* 1124.
Hedypnois hispida, *Huds. Fl. Angl.* 340.
Dandelion hawk-weed.

Chalky pastures; perennial; July.

Root fusiform; *calathides* drooping, afterwards upright.

2. *Virea incana.* *Grey virey.*

Leaves oblong, rather toothed, woolly, rough; hairs radiated at the tip; *scape* simple, downy; *pericline* downy.

Dens leonis montanus angustifolius, *Raii Syn.* 171, 4.
Hieracium sextum Clusii, *Ger. em.* 302, 3.
Hieracium montanum angustifolium, *Park.* 799.
Hieracium incanum, *Lin. S. P.*
Leontodon Taraxacum γ, *Huds. Fl. Angl.* 340.
Hieracium alpinum, *Villars Delph.* 3, 94.

Alpine pastures and walls; peren.; May to September.

b. Vireæ. *Tube of the corolla bald; tip of the lobes not glandular; scape often branched.*

3. *Virea Pyreniaca.* *Pyrenian virey.*

Leaves muricated, toothed, bald; *scape* simple or slightly branched; *bractea* 1, about the middle of the scape; *pericline* hairy.

Hieracium Taraxici, *Lin. S. P.* 1125.
Picris Taraxici, *Allioni Pedem.* 1, 24.
Hedypnois autumnale ε, *Huds. Fl. Angl.* 341.
Hedypnois Taraxaci, *Smith Fl. Brit.* 825.
Leontodon Taraxaci, *Engl. Bot.* 820.
Apargia Taraxaci, *Willd. S. P.* 3, 1550.

Near alpine rivulets; perennial; August.

Leaves bald, rarely nearly linear, toothed; *scape* one or two-flowered, thickened above, downy; hairs black; *corollæ* golden.

4. *Virea autumnalis.* *Autumn virey.*

Leaves lanceolate, toothed or pinnatifid, rather bald; *scape* with declinate branches; pedicells scaly, tumid above; *pericline* downy.

Hieracium minus præmorsa radice, *Raii Syn.* 164, 1; *Park.* 794.
Hieracium minus, sive leporinum, *Ger. em.* 296.
Leontodon autumnale, *Lin. S. P.* 1123.
Hedypnois autumnalis, *Huds. Fl. Angl.* 341.
Scorzonera autumnalis, *Lamarck Fl. Fr.* 282.
Apargia autumnalis, *Hoffm. Germ.* 4, 113.
Small hares-hawk-weed. Yellow devil's bit.

Fields and pastures; perennial; August.

Calathides many, small; *corollæ* golden, those of the circumference reddish on the outside.

β. *laciniata.* *Leaves* jagged.

Hieracium præmorsum laciniatum, *Dillen in Raii Syn.* 164, 2.

γ. *minor.* *Leaves* small, pointed.

Hieracium folio acuto minus, *Dillen in Raii Syn.* 164, 3.

δ. *obtusa.* *Leaves* small, blunt.

Hieracium folio obtuso minus, *Dillen in Raii Syn.* 164, 4.

ε. *hirsuta.* *Leaves* hairy.

ζ. *prolifera.* *Clinanthus* proliferous.

XV. 190. PICRIS. Dioscorides. *Yellow-succory.*

Bracteæ many, unequal, linear, lanceolate; *pericline* conical; scales many, equal, in one row; *calathides* many-flowered; *clinanthus* flat, bald, pitted; *akenium* transversely streaked; pappus sessile, feathered; rays threadlike, equally bearded.—*Stem* leafy; *periclines* rough; *corollæ* yellow.

Picris hieracioides. *Hawk-weed yellow-succory.*

Stem rough, branched, divaricated; *leaves* very rough, lanceolate, toothed, waved; *calathides* corymbose; *bracteæ* loose.

Hieracium asperum, majori flore in agrorum limitibus, *Raii Syn.* 167, 15.
Hieracium asperum, *Ger. em.* 298, 7.
Cichoreum pratense luteum asperum, *Park.* 777.
Picris hieracioides, *Lin. S. P.* 1115.
Hedypnois hieracioides, *Huds. Fl. Angl.* 342.

Edges of woods on chalk; biennial; July and August.

Root-leaves lanceolate; stem-leaves embracing the stem, bent back; *corymbus* leafy; *peduncle* scaly, slightly thickened.

XVI. 191. HELMINTHIA. Gærtner. *Langue-de-bœuf.*

Bracteæ 5, broad, as long as the pericline; *pericline* cylindrical, scales 8, equal in one series; *calathides* many-flowered; *clinanthus* flat, tubercular or annulate, naked; *akenium* reverse-ovate, transversely wrinkled; *pappus* stipitate, feathery; rays equal.

Helminthia echioides. *Bugloss langue-de-bœuf.*

Bracteæ broad, ovate, heartshape, rather spinous; *leaves* repand.

Hieracium echioides capitulis cardui benedicti, *Raii Syn.* 166, 13.
Buglossum luteum, *Ger. em.* 798, 2.
Buglossum luteum, seu lingua bovis, *Park.* 800.
Picris echioides, *Lin. S. P.* 1114.
Helminthia echioides, *Gærtn. Sem. et Fr.* 2, 368.

Edges of fields on clay; annual; June and July.

Stem upright, branched; *leaves* light green, shining, root-leaves ovate; stem-leaves embracing the stem; *calathides* slightly panicled.

XVII. 192. TRAGOPOGON. Dioscor. *Goats-beard.*

Pericline simple, cylindrical, pyramidical; scales 8 or 10, equal, soldered by their edges; *calathide* many-flowered; *clinanthus* naked, pitted; *akenium* streaked lengthways; *pappus* stipitate, feathered; *stipes* slender, rays unequal.— *Leaves* not cut, grass-like; *corollæ* gold-colour or blue; *peduncles* simple.

1. *Tragopogon pratense.* *Meadow goats-beard.*

Leaves bald, not cut, channelled, pointed, dilated at bottom; *peduncles* round above; *pericline* as long as the flowers in the circumference.

Tragopogon luteum, *Raii Syn.* 171, 1; *Ger. em.* 735, 2; *Park. Par.* 514.
Trapogon pratense, *Lin. S. P.* 1109.
Go to bed at noon. Joseph's Flower. Star of Jerusalem. Noon-tide. Yellow goats-beard.

Fields and pastures; biennial; June.

Root milky, sweet; *stem* branched; *calathides* large, closing early in the day; *corollæ* gold-yellow. — Young shoots a good asparagus.

2. *Tragopogon porrifolium.* *Leek-leaved goats-beard.*

Stem and *leaves* stiff, bald; *peduncles* thickened above; *pericline* longer than the flowers in the circumference.

Tragopogon purpureum, *Raii Syn.* 171, 2; *Ger. em.* 735, 1; *Park.* 412.
Tragopogon porrifolium, *Lin. S. P.* 1110.
Artifi. *Salsafie.* *Purple goats-beard.*

Fields, also cultivated; biennial; May and June.

Stem 4 feet high; *leaves* scarcely waved; *scales* of the pericline nearly twice as long as the flowers; *corollæ* violet. —*Roots* sweet, used in salads, or boiled in soups, very nutritive; useful in atrophy, coughs, short breath, difficulty of urine, and the stone.

XVIII. 193. CICHORIUM. Theophrastus. *Succory.*

Bracteæ 5, short, oblong, adpressed; *pericline* cylindrical; scales 8, connate at bottom, becoming reflexed; *clinanthus* naked or slightly hairy; *akenium* compressed, streaked; *pappus* chaffy; chaffs many, in a double series, much shorter than the akenia.

1. *Cichorium sylvestre.* *Wild succory.*

Leaves runcinate, main rib rather hirsute; *calathides* sessile, axillary, in pairs.

Cichorium sylvestre, *Raii Syn.* 172, 1; *Ger. em.* 284, 1; *Park.* 776.
Cichorium Intybus, *Lin. S. P.* 1142.
Cichorium perenne, *Stokes Bot. Mat. Med.* 133.

Edges of fields; perennial; July and August.

Root fleshy; *stem* upright, angular, branched; *calathides* many, sessile; *corollæ* blue or white.

β. *globosum.* *Branches* balled.

2. *Cichorium sativum.* *Cultivated succory.*

Leaves oblong, toothed, bald; *peduncles* axillary, in pairs; one long, 1-flowered; the other very short, 3 or 4-flowered.

Intybus sativa, *Ger. em.* 282, 3.
Cichoreum sativum, *Park.* 774.
Cichorium Endivia, *Lin. S. P.* 1143.
Endive.

Cultivated; biennial; July and August.

Leaves toothed at the edge.—Blanched herb eaten in salads, bitter.

β. *crispum.* *Leaves* curled at the edge.

B. Cynarocephaleæ. *Pericline* imbricate, scales often spinous; *clinanthus* fleshy, chaffy; *corollæ* all tubular; *style* jointed above; pappus stiff.—*Leaves* alternate, often spinous; *stamens* and *stigma* often irritable, contractile.

a. *Pappus* 0.

Flowers, centre female; circumf. androgynous; *pericline-scales* compound, spinous Hippophæstum. 205.
Flow. centre hermaphrodite; circumf. neuter; *pericline-scales* fringed, not spinous ..... Phrygia. 203.

b. *Pappus hairy, rays nearly equal, connate at bottom into a deciduous ring; flowers all hermaphrodite.*

Pericline-scales simple, spinous; *akenium* transversely furrowed ..... Onopordum. 194.
Pericline-scales simple, spinous; *akenium* streaked; *clinanthus* bristly ..... Carduus. 198.
Pericline-scales appendiculated; appendix toothed, spinous ..... Silybum. 197.

c. *Pappus hairy, rays unequal, imbricate, in many series.*

Flow. female, or male or hermaph. *pericline-scales* lanceolate, pointed ..... Serratula. 196.
Flow. centre hermaph.; circumf. neuter; *pericline-scales* lanceolate, serrated ..... Cyanus. 202.
Flow. centre hermaph.; circumf. neuter; *pericline-scales* lanceolate, ovate, pinnate .... Jacea. 204.
Flow. centre hermaph.; circumf. neuter; *pericline-scales* palmate, spinous .... Polyacantha. 206.
Flow. centre hermaph.; circumf. neuter; *pericline-scales* compound..... Leucantha. 207.
Flowers all hermaphrodite; *pericline-scales* linear, hooked at the tip..... Arctium. 195.

d. *Pappus feathery; flowers all hermaphrodite.*

Pericline-scales, outer spinous; inner coloured, scariose, radiated..... Carlina. 201.
Pericline-scales all linear, spinous; *pappus* deciduous ..... Cirsium. 199.
Pericline-scales all ovate, pointed; *pappus* persistent..... Bennettia. 200.

XIX. 194. ONOPORDUM. Pliny. *Cotton-thistle.*

Pericline globose, becoming depressed; scales awlshape, lax, ending in an awlshape spine; *flowers* all hermaphrodite; *clinanthus* flat, honeycombed; edge of the pits raised, sharp, chaffy; *akenium* reverse-ovate, compressed, 4-sided, transversely furrowed; *pappus* hairlike; rays unequal, rough, annular at the base, deciduous.—*Stem* hollow, very tall; *leaves* large, thorny, tomentose; *calathides* terminal, solitary.

Onopordum vulgare. *Common cotton-thistle.*

Leaves decurrent, sinuated, woolly on both sides, toothed; *pericline-scales* spreading, awlshape.

Carduus tomentosus, acanthium dictus, vulgaris, *Raii Syn.* 196, 14.
Acanthium album, *Ger. em.* 1149, 1.
Acanthium vulgare, *Park.* 979.
Onopordium Acanthum, *Lin. S. P.* 1158.
White cotton-thistle. Cotton-thistle. Wild white thistle. Argentine, or silver thistle.

Ruins and waysides; biennial; July.

Root fusiform; *plant* white, woolly; *stem* 3 feet high; *flowers* upright; *corollæ* purple.—*Down* of the stem and leaves used to stuff bedding, and mix with feathers; young shoots and periclines eaten as potherbs; seeds bitter, much sought after by small birds.

XX. 195. ARCTIUM. Dioscorides. *Burdock.*

Pericline spherical; scales imbricate, awlshape, ending in a recurved hooked spine; *flowers* all hermaphrodite; *clinanthus* flat, chaffy; chaff bristlelike, as long as the pericline; *akenium* compressed, 4-sided; *pappus* hairy, rays unequal, shorter than the akenium, persistent, in 2 or 3 rows. — *Leaves* large, heartshape, petioled, not armed; *flowers* rather corymbose.

1. *Arctium tomentosum.* *Downy burdock.*

Pericline, when full grown, downy; down cobwebby.

Lappa major montana capitulis tomentosis sive arctium Dioscoridis, *Raii Syn.* 197, 4.
Bardana major, *Ger. em.* 810, 1 *.
Bardana major lanuginosis capitulis, *Park.* 1222.
Arctium Lappa β, *Lin. S. P.* 1143.
Arctium Bardana, *Willd. S. P.* 1632.
Lappa tomentosa, *De Cand. Fl. Gall.* 3009.
Ruins; biennial; July and August.

Stem red; *leaves* not cut; *pericline* large, brownish purple; *corollæ* purple.

β. *minus*. *Pericline* small, roundish, brown.

2. *Arctium major*. *Great burdock.*

Pericline, when full grown, bald.

Lappa major, Arctium Dioscoridis, *Raii Syn.* 197, 2.
Bardana major, *Ger. em.* 809, 1.
Bardana vulgaris major, *Park.* 1222.
Arctium Bardana, *Lin. S. P.* 1143.
Arctium Lappa, *Lamarck Ill. Gen.* 667.
Lappa major, *De Cand. Fl. Gall.* 3010.
Great burr. Burr dock. Clot burr.

Ruins; biennial; July and August.

Leaves toothed; *calathides* solitary; *pericline* large.—*Shoots* eaten as asparagus, but very inferior.

β. *minus*. *Calathides* in heads; *pericline* small.

Lappa minor, *De Cand. Fl. Gall.* 3011.

XXI. 196. SERRATULA. Pliny. *Sawwort.*

Pericline ovate, bellied; scales imbricate, ovate and lanceolate, pointed, not spinous; *flowers* female, or male and hermaphrodite; *clinanthus* flat, chaffy; chaffs bristlelike; *stigma* of the female flowers very large, wavy; *akenium* streaked; *pappus* hairlike, rough, persistent, in many series, longer than the akenium, rays unequal.—*Plant* polygamous, dioicous; *root* perennial; juice yellow; *leaves* serrated, not spinous; *calathides* corymbose; *corollæ* purple.

Serratula tinctoria. *Dyeing sawwort.*

Leaves acutely serrated, bald at the base, mostly pinnatifid, rarely not cut; *corymbus* even-topped.

Serratula, *Raii Syn.* 196, 1.
Serratula purpurea, sive alba, *Ger. em.* 713.
Serratula vulgaris flore purpureo, *Park.* 474.
Serratula tinctoria, *Lin. S. P.* 1153.
Carduus tinctorius, *Stokes Bot. Mat. Med.* 4, 142.

Woods and hedges; perennial; July and August.

Root thready; *stem* upright, slender; *leaves* lyrate; *pericline-scales* rather woolly; *corollæ* purple.—*Plant* dyes yellow.

β. *alba*. *Flowers* white.

γ. *lancifolia*. *Leaves* lanceolate, serrated.

XXII. 197. SILYBUM. Dioscorides. *Milk-thistle.*

Pericline bellied; scales imbricate, close pressed together below, with an appendage at the tip; appendage spreading, weak, dilated, spinous on the edges, grooved, ending in a strong spine; *flowers* all hermaphrodite; *clinanthus* chaffy; chaffs bristlelike, half as long as the pericline; *pappus* hairy, rays linear, fringed, equal, longer than the akenium, forming a ring at the bottom, deciduous. — *Stem* high, branched; *leaves* spinous; stem-leaves embracing the stem; *calathides* large, solitary, terminal; *peduncles* naked.

Silybum Mariæ. *Mary's milk-thistle.*

Leaves embracing the stem, hastate, pinnatifid, bald.

Carduus Mariæ, *Raii Syn.* 195, 12; *Ger. em.* 1150.
Carduus Mariæ vulgaris, *Park.* 976.
Carduus Marianus, *Lin. S. P.* 1153.
Cirsium maculatum, *Scop. Carn.* 2, 1009.
Silybum Marianum, *Gærtn. Sem. et Fr.* 2, 378.
Carduus lactifolius, *Stokes Bot. Mat. Med.* 141.
Our lady's thistle. Milk thistle.

Roadsides and ruins; annual or biennial; August.

Stem 6 feet high; *leaves* dark green with broad white anastomosing veins.—*Root* eaten early in spring; also the young stems, being peeled, and soaked in water to extract the bitterness; and the scales of the cup as artichokes.

β. *unicolor.* *Leaves* not variegated.

Carduus Mariæ hirsutus non maculatus, *Raii Syn.* 195, 13.

XXIII. 198. CARDUUS. Pliny. *Thistle.*

Pericline ovate, bellied; scales linear, simple, without appendices, pointed, spinous at the tip; *flowers* all hermaphrodite; *clinanthus* chaffy; chaffs linear, silky, as long as the pericline; pappus hairy; rays equal, longer than the akenium, forming a ring at bottom, deciduous. — *Stem* mostly hollow; *leaves* decurrent, spinous; calathides terminal; *corollæ* blue.

1. *Carduus nutans.* *Nodding thistle.*

Leaves interruptedly decurrent, spinous; *calathides* drooping; *pericline-scales* lanceolate; upper ones spreading.

Carduus nutans, *Lin. S. P.* 1150.
Musk thistle.

Ruins; annual; July and August.

Root fusiform; *stem* 2 feet high; *leaves* greenish on both sides; *calathides* terminal, solitary, peduncled, drooping; —*Odour* like that of musk.

2. *Carduus acanthoides.* *Bear's-breech thistle.*

Leaves decurrent, sinuate, spinous; *pericline* globose, slightly peduncled; scales linear, recurved.

Carduus caule crispo, *Raii Syn.* 194, 2.
Polyacanthos, *Ger. em.* 1173, 1.
Carduus polyacanthos, *Park.* 982.
Carduus acanthoides, *Lin. S. P.* 1150.
Carduus crispus, *Huds. Fl. Angl.* 350.
Thistle upon thistle. Grey thistle.

Roads near fields; annual; June and July.

Leaves green on both sides, bald; *calathides* terminal, mostly peduncled; *corollæ* dark purple.

3. *Carduus tenuiflorus.* *Slender-flowered thistle.*

Leaves decurrent, sinuate, spinous; nappy beneath; *pericline* nearly cylindrical, aggregate; scales lanceolate, rather upright; *peduncles* very short, appendiculately spinous.

Carduus spinosissimus capitulis minoribus, *Raii Syn.* 194, 3.
Carduus acanthoides, *Hudson Fl. Angl.* 351.
Carduus tenuiflorus, *Curtis Fl. Lond.*
Welted thistle.

Fields and waysides; annual; June and July.

Stem 4 feet high, slightly branched; *pericline* pale, rather woolly; *calathides* crowded; *corollæ* pale purple.

XXIV. 199. CIRSIUM. Dioscorides. *Soft-thistle.*

Pericline bellied or cylindrical; scales imbricate, linear pointed, not appendiculated; *flowers* all hermaphrodite; *clinanthus* chaffy, chaffs pale, capillary, as long as the pericline; *pappus* featherlike; rays equal, longer than the akenium, annular at the base, deciduous.—*Leaves* spinous.

1. *Cirsium palustre.* *Marsh soft-thistle.*

Leaves decurrent, naked, lanceolate, toothed, rough, edge spinous; *calathides* racemose, glomerate; *pericline-scales* ovate, lanceolate, mucronate, pressed close.

Carduus palustris, *Raii Syn.* 194, 4; *Park.* 983; *Lin. S. P.* 115, 1.
Cnicus palustris, *Willd. S. P.* 1662.
Cirsium palustre, *De Candolle Fl. Gall.* 3072.

Damp fields and pastures; biennial or perennial; July and August.

Root branchy; *stem* stiff, branched, 6 feet high; *leaves* pinnatifid, dark green, lobes sinuated; *pericline* ovate; *corollæ* dark purple or white.

β. *mitius.* *Leaves* less spinous.

Carduus palustris mitior bardanæ capitulo in summo caule singulari, *Dillen in Raii Syn.* 194, 5.

γ. *cristatus.* *Stems* many, coalescent, bearing a broad flat head of flowers.

2. *Cirsium lanceolatum.* *Spear soft-thistle.*

Leaves decurrent, hispid, pinnatifid; lobes 2-cut, divaricating, spinous; *pericline* ovate, downy; down cobweb-like; scales lanceolate, spinous, spreading,

Carduus lanceatus, *Raii Syn.* 195, 8; *Ger. em.* 1174, 6.
Carduus lanceatus latifolius seu major, *Park.* 982.
Carduus lanceolatus, *Lin. S. P.* 1149.
Cnicus lanceolatus, *Willd. S. P.* 1662.
Cirsium lanceolatum, *De Cand. Fl. Gall.* 3073.

Waysides and pastures; biennial; July to September.

Root branched; *stem* hairy, 4 feet high; *leaves* woolly beneath; *calathides* terminal, large; *pericline* ovate; *corollæ* purple or white.

β. *minus.* *Calathides* small.

Carduus lanceatus flore et capite minoribus, *Dillen in Raii Syn.* 195, 9.

3. *Cirsium heterophyllum.* *Odd-leaved soft-thistle.*

Leaves embracing the stem, heartshape, lanceolate, serrate, fringed, nappy beneath; lower leaves rather incised; *pericline-scales* lanceolate, pressed close, rather mucronate, bald; *calathides* mostly solitary, peduncled.

Cirsium Britannicum Clusii repens, *Raii Syn.* 193, 2.
Cirsium Anglicum secundum Clusii, *Ger. em.* 1183, 5 *; Dr. Penny's figure.
Cirsium aliud Anglicum, *Park.* 961.
Carduus heterophyllus, *Lin. S. P.* 1154.
Carduus helenoides, *Huds. Fl. Angl.* 352.
Cnicus heterophyllus, *Willd. S. P.* 1664.
Cirsium heterophyllum, *De Candolle Fl. Gall.* 3086.
Great English soft thistle. Melancholy thistle.

Alpine pastures; perennial; July and August.

Root creeping, knobbed; *stem* upright, nearly simple, woolly; *leaves* smooth, bald, green above; white, nappy beneath; root-leaves petioled; *calathide* terminal, mostly solitary, drooping becoming upright; *pericline* ovate.

4. *Cirsium acaule.* *Stemless soft-thistle.*

Leaves petioled, pinnatifid, toothed, fringed, spinous; *calathides* peduncled; *peduncles* radical, solitary; *pericline-scales* lanceolate, closely imbricate.

Carduus q. carlina acaulis minore purpureo flore, *Raii Syn.* 195, 7.
Carlina acaulis minor flore purpureo, *Ger. em.* 1158, 3.
Carlina acaulis Septentrionalium, *Park.* 969.
Carduus acaulis, *Lin. S. P.* 1156.
Cnicus acaulis, *Willd. S. P.* 1664.
Cirsium acaule, *De Candolle Fl. Gall.* 3089.
Dwarf carline thistle.

Fields and pastures; perennial; July and August.

Root woody; *stem* 0; *leaves* depressed, bald; *calathides* large; *corollæ* purple.

5. *Cirsium arvense.* *Field soft-thistle.*

Leaves sessile, lanceolate, pinnatifid, hispid, toothed, waved, spinous, rather woolly beneath; *calathides* panicled; *periclines* first globose, then cylindrical.

Carduus vulgatissimus viarum, *Raii Syn.* 194, 6; *Ger. em.* 1173, 4.
Carduus ceanothos sive viarum et vinearum repens, *Park.* 959.
Serratula arvensis, *Lin. S. P.* 1149.
Carduus arvensis, *Curtis Fl. Lond.*
Cirsium arvense, *De Candolle Fl. Gall.* 3070.
Common way thistle. Creeping thistle.

Fields and waysides; perennial; July.

Root creeping, flagelliform; *stem* smooth; *pericline-scales* woolly on the edge; *corollæ* purple, rarely white.

6. *Cirsium eriophorum.* *Wool-bearing soft-thistle.*

Leaves sessile, pinnatifid, hispid; *lobes* 2-rowed, doubled, divaricated, spinous; *pericline* globose, villous, cobweblike; *scales* oblong; *apex* linear, long, mucronate, reflex.

Carduus tomentosus corona fratrum dictus, *Raii Syn.* 195, 10; *Park.* 978.
Carduus eriocephalus, *Ger. em.* 1152, 6.
Carduus tomentosus Anglicus, *Park.* 979.
Carduus eriophorus, *Lin. S. P.* 1153.
Cirsium eriophorum, *De Candolle Fl. Gall.* 3091.
Cnicus eriophorus, *Willd. S. P.*
Woolly headed thistle.

Chalky mountains; biennial; August.

Root fusiform; *stem* much branched; *leaves* rough above, woolly beneath; *calathides* solitary, very large; *pericline-scales* fringed, coloured above; *corollæ* purple.

7. *Cirsium tuberosum.* *Tuberous soft-thistle.*

Leaves embracing the stem, pinnatifid, fringed with spines, lobes 2-cut, toothed near the base; *calathides* 1 or 2; *pericline-scales* lanceolate, mucronate, spread out.

Carduus tuberosus, *Lin. S. P.*
Cnicus tuberosus, *Willd. S. P.* 1680.
Cirsium dissectum, *Lamarck Enc. Meth.*

Woods; perennial; July and August.

Root tuberous; tubers oblong; *stem* villous, not spined.

XXV. 200. BENNETTIA. *Thistle-gentle.*

Pericline ovate, cylindrical; scales imbricate, ovate, lanceolate, blunt; *flowers* all hermaphrodite; *clinanthus* chaffy; chaffs lanceolate, as long as the pericline; *pappus* featherlike; rays equal, persisting.—*Root* woody perennial; *stem* mostly simple; *root-leaves* petioled; upper leaves sessile, ovate, not spinous, woolly; *calathides* corymbose, upright; *corollæ* purple.

Messieurs Edward and John Bennett, surgeons and apothecaries of London, who devote the whole of their leisure to the study of botany and natural history, and have kindly given their assistance to this work.

Bennettia alpina. *Alpine thistle-gentle.*

Leaves ovate, lanceolate, slender at the base, toothed, nappy beneath; *pericline* coloured, villous.

Cirsium humile montanum cynoglossi folio, polyanthemum, *Raii Syn.* 193, 3.

Carduus mollis foliis lapathi, *Ger. em.* 1184.

Serratula alpina, *Lin. S. P.* 1145.

Cirsium alpinum, *De Candolle Fl. Gall.* 3095.

Dock-leaved thistle-gentle.

Apine rocks; perennial; July and August.

Stem round, woolly; *leaves* rather bald above; *calathides* nearly umbellate, large; *anthers* blue.

β. *cynoglossifolia.* *Leaves* linear, lanceolate, long.

Cirsium montanum polyanthemum salicis folio angusto denticulato, *Raii Syn.* 193, 4.

γ. *discolor.* *Root-leaves* ovate, nearly heartshape.

Serratula discolor, *Willd. S. P.* 1639.

XXVI. 201. CARLINA. Dodonæus. *Carline-thistle.*

Bracteæ many, weak, pinnate-spinous; pericline cylindrical; scales linear, cartilaginous, shining, coloured, radiating; *flowers* all hermaphrodite; *filaments* very short, quite bald; *anthers* with two long horns at the base; *clinanthus* concave, chaffy; chaffs below membranaceous, keeled, not cut; above bristlelike, many-cut, as long as the pericline; *akenium* with a chaffy ring, above villous; villi silky; *pappus* featherlike, longer than the seed; rays adhering together at the base in twos and threes, and all grown together into a ring, deciduous.

1. *Carlina vulgaris.* *Common carline-thistle.*

Stem woolly; *leaves* lanceolate, toothed, spinous, pubescent beneath; *calathides* many, corymbose.

Carlina sylvestris quibusdam, aliis atractylis, *Raii Syn.* 175, 1.
Carlina sylvestris major, *Ger. em.* 1159, 1.
Carlina vulgaris, *Lin. S. P.* 1161.

Sandy fields and pastures; biennial; July.

Root fusiform; *stem* upright, 1 foot high; *calathides* solitary, terminal; *corollæ* purple white.

XXVII. 202. CYANUS. Pliny. *Bluebottle.*

Pericline bellied, conical; scales lanceolate, serrated, inner scales with a claw; *flowers* of the centre hermaphrodite, regular; of the circumference neuter, large, irregular; *clinanthus* chaffy; chaffs awlshape, flat, as long as the akenia; *pappus* chaffy, persistent; chaffs toothed, unequal.

Cyanus vulgaris. *Common bluebottle.*

Leaves linear, not in the least cut; lower leaves pinnatifid at the base.

Cyanus, *Raii Syn.* 198, 1.
Cyanus vulgaris, *Ger. em.* 732; *Park.* 482.
Centaurea Cyanus, *Lin. S. P.* 1289.
Corn-flower. Blue-blow. Hurt-sickle.

Cornfields; annual; July and August.

Root fibrous; *stem* much branched; *leaves* pointed, rather woolly; *calathides* solitary, peduncled.—*Flowers* yield a fine water colour; plant blunts the sickles of the reapers.

XXVIII. 203. PHRYGIA. Persoon. *Knapweed.*

Pericline globular; scales ovate, pinnatifid, bristlelike, inner scales clawed; *flowers* of the centre hermaphrodite, regular; of the circumference neuter, large, irregular; *clinanthus* chaffy; chaffs bristlelike, half as long as the pericline; *akenium* 4-sided, bristly; *pappus* chaffy, persisting; chaffs linear, rough, unequal.

1. *Phrygia major.* *Great knapweed.*

Leaves pinnatifid; lobes lanceolate, toothed, slightly hairy; *lobes* of the pericline-scales upright.

Jacea major, *Raii Syn.* 198, 1; *Ger. em.* 727, 2.
Jacea nigra vulgaris laciniata, *Park.* 470.
Centaurea Scabiosa, *Lin. S. P.* 1291.
Great mat fellon. Bull weed.

Fields and waysides; perennial; July and August.

Stem 2 or 3 feet high, branched; *leaves* dark green; *calathides* solitary, peduncled; *flowers* of the circumference linear, slender.

2. *Phrygia nigra.* *Black knapweed.*

Leaves lanceolate; root-leaves slightly toothed; stem-leaves undivided, serrated; *lobes* of the pericline-scales upright; *calathides* flosculous.

Jacea nigra, *Raii Syn.* 198, 2; *Ger. em.* 727, 1.
Jacea nigra vulgaris, *Park.* 468.
Centaurea nigra, *Lin. S. P.* 1288.
Mat fellon.

Fields and pastures; perennial; June to August.

Root creeping; *stem* branched; *upper leaves* ovate, serrate or not cut; *calathides* solitary, terminal; *flowers* all equal and fertile.

β. *tomentosa.* *Plant* small, nappy, grey.
Jacea nigra minor, tomentosa, laciniata, *Dillen in Raii Syn.* 199, 3.

3. *Phrygia pratensis.* *Meadow knapweed.*

Leaves lanceolate, toothed, rather bald; upper leaves strap-shape, not cut; *pericline-scales* flat; lower scales rather scarious; lobes upright; *calathides* radiated.

Jacea nigra, flore jaceæ majoris, *Raii Syn.* 199, 2; var.
Centaurea pratensis, *Thuill. Fl. Par.* 444.
Centaurea nigra β, *Smith Fl. Brit.* 910.

Fields and pastures; perennial; July and August.

Stem fluted, cottony; *outer flowers* purple, radiating, barren; lobes deep, strapshape; central flowers white.

XXIX. 204. JACEA. Clusius. *Jacea.*

Pericline globose; scales scarious, ovate, torn; inner scales clawed; *flowers* in the centre hermaphrodite; of the circumference neuter, large, irregular; *clinanthus* chaffy; chaffs linear, awlshape, shorter than the pericline; *pappus* 0, or bristlelike, very short, deciduous.

Jacea nigra. *Black jacea.*

Leaves lanceolate, not in the least cut, root-leaves rather toothed; *branches* angular.

Jacea nigra quæ in Germaniæ pratis nascitur, *Dillen in Raii Syn.* 199, 2; var.
Rhaponticum Jacea, *Scopoli Carn.* 2, 1017.
Centaurea Jacea, *Lin. S. P.* 1290.

Woods and fields, Sussex; perennial; August and September.

Pericline-scales pale brown, shining; lower scales pinnatifid.

XXX. 205. HIPPOPHÆSTUM. Columna.
Star-thistle.

Pericline ovate; scales imbricate, cartilaginous, tip ending in a long spine; sides toothed and spinous at the base; nearly equal; *flowers* of the centre hermaphrodite, of the circumference female; *clinanthus* chaffy; chaffs linear, short; *akenium* ovate, with a cartilaginous ring above; *pappus* 0.

Hippophæstum vulgare. *Common star-thistle.*
Stem spreading, divaricated, hairy; *leaves* pinnatifid, toothed; *calathides* sessile.

Carduus stellatus, *Raii Syn.* 196, 15; *Ger. em.* 1166, 1.
Carduus stellaris, seu calcitrapa vulgaris, *Park.* 989.
Centaurea Calcitrapa, *Lin. S. P.* 1297.
Rhaponticum Calcitrapa, *Scopoli Carn.* 2, 1019.
Calcitrapa Hippophæstum, *Gærtner* 2, 367.

Ruins and sandy sea-shores; annual; July and August.
Stem much branched; *calathides* lateral, solitary; *corollæ* rose-colour.

XXXI. 206. POLYACANTHA. *Jersey-thistle.*
Pericline ovate; scales ovate, tip palmate, 5-cut, spreading, spinous; *flowers* of the centre hermaphrodite, regular; of the circumference neuter, large, irregular; *clinanthus* chaffy; chaffs hairy, shorter than the pericline; *akenium* ovate; *pappus* hairy, persisting; rays unequal, stiff.

Polyacantha procumbens. *Procumbent Jersey-thistle.*
Leaves lyrate, toothed, hispid, rather embracing the stem; *calathides* sessile, terminal.

Centaurea Isnardi, *Lin. S. P.* 1295.
Jersey star-thistle.

Fields and pastures, Jersey; perennial; July and August.
Stem prostrate, branched, angular; *leaf-lobes* rather spinous; upper leaves not cut; *calathides* solitary; *pericline* bald; scales spreading; *corollæ* light purple.

XXXII. 207. LEUCANTHA. Dalechamp.
Yellow-thistle.

Pericline ovate; scales ovate, palmate, spinous; innermost scales scarious, torn; *flowers* in the centre hermaphrodite, in the circumference neuter, scarcely longer than those in the centre; *clinanthus* chaffy; chaffs linear; *akenium*

ovate; *pappus* bristlelike, shorter than the akenium; rays rough.—*Stem* branched; *upper leaves* decurrent; *calathides* solitary, terminal; *corollæ* golden yellow.

Leucantha cyanifolia. *Bluebottle yellow-thistle.*

Leaves decurrent, woolly, lanceolate, not cut; root-leaves lyrate; *calathide* solitary; *spines* of the pericline straight.

Carduus stellatus luteus foliis cyani, *Raii Syn.* 196, 2.
Carduus solstitialis, *Ger. em.* 1166, 2.
Carduus solstitialis Dodonæi, *Park.* 989.
Centaurea solstitialis, *Lin. S. P.* 1197.
Saint Barnaby's thistle.

Fields and hedges; annual; July and August.

Stem 2 feet high, branched, many-flowered; *root-leaves* denticulated.

C. CORYMBIFERÆ. *Calathides* flosculous, or radiated; *clinanthus* scarcely fleshy, or not at all; *style* not jointed at the base of the lobes.

a. *Pappus* 0; *clinanthus naked.*

Calathides flosculous ..... ARTEMISIA. 212.

b. *Pappus* 0; *clinanthus naked; calathides radiated.*

Rays white; *pericline-scales* equal, in two series ..... BELLIS. 220.

Rays white; *pericline* flattish; scales imbricate, herbaceous ..... CHAMOMILLA. 219.

Rays white; *pericline* hemispherical; scales imbricate, coriaceous ..... LEUCANTHEMUM. 216.

Rays yellow; *pericline* hemispherical; scales imbricate; *akenia* uniform CHRYSANTHEMUM. 215.

Rays yellow; *pericline-scales* in one series; *akenia* difform, boatshape..... CALENDULA. 208.

c. *Pappus* 0; *clinanthus villous or chaffy.*

Calathides flosculous; *clinanthus* villous ABSINTHIUM. 213.

Calath. flosculous; *clinanthus* chaffy ..... DIOTIS. 214.

Calath. radiated; *clinanthus* naked below; chaffy above; chaffs linear..... MARUTA. 222.

Calath. radiated; rays ovate, short; *clinanthus* chaffy; chaffs linear ..... ACHILLEA. 224.

d. *Pappus marginal.*

Clinanthus naked; *calathides* flosculous;
pericline-scales imbricate, pressed close TANACETUM. 211.
Clin. naked, convex; *calath.* radiated;
pericline-scales imbricate, edge scariose PYRETHRUM. 217.
Clin. naked, flat; *calath.* radiated;
pericline-scales imbricate, edge withered MATRICARIA. 218.
Clin. chaffy, convex; *calath.* radiated;
rays white ..... CHAMÆMELUM. 221.
Clin. chaffy, flat; *calath.* radiated .... ANTHEMIS. 223.

e. *Pappus chaffy or spinous; clinanthus chaffy.*

Calathides chaffy, radiated; *pericline*
imbricate; *pappus* chaffy, deciduous HELIANTHEMUM. 209.
Calathides radiated; *pericline* simple;
pappus spinous, persisting ..... BIDENS. 210.

f. *Pappus of the rays* 0, *of the centre hairlike.*

Calathides radiated; *rays* yellow .... DORONICUM. 237.

g. *Pappus of the male pencilshape, of the female hairlike.*

Calathides flosculous; scales scariose ANTENNARIA. 225.

h. *Pappus hairlike; pericline-scales equal, in* 1 *series.*

Leaves cauline; *rays* 0, or yellow;
pericline-scales and *bracteæ* sphacelated ... SENECIO. 239.
Leaves cauline; *rays* yellow;
pericline-scales not sphacelated ..... CINERARIA. 238.
Leaves radical; *rays* linear, yellow ... TUSSILAGO. 240.
Leaves radical; *rays* 0 ..... PETASSITES. 241.

i. *Pappus hairlike; pericline-scales imbricate; calathides flosculous.*

Flowers hermaphrodite and female; *pericline*
cylindrical, scarious, sphacelated .... GNAPHALIUM. 226.
Flowers aggregate herm. and fem.; *pericline*
cylindrical, scariose or coloured ..... GIFOLA. 227.
Flowers hermaphrodite, yellow;
style short; *branches* short, ovate..... CHRYSOCOMA. 236.
Flowers hermaphrodite, purple;
style short; *branches* long, linear ..... EUPATORIUM. 242.

k. *Pappus hairlike; pericline-scales imbricate; calathides radiated.*

Rays yellow, very slender; *pappus* double, the outer membranaceous ..... PULICARIA. 229.

Rays yellow, many, very short, slender; *peric. sc.* outer herbaceous, inner cartilaginous ..... CONYZA. 228.

Rays yellow, very slender; *anthers*, basillary appendix long ..... INULA. 240.

Rays yellow, many, slender; *anthers*, basillary appendix very short ..... CRITHEIS. 251.

Rays yellow, 5 or 10, ovate; *pericline-scales* close; *calathides* racemose ..... SOLIDAGO. 233.

Rays blue or white, many, linear; *tubular flowers* all hermaphrodite ..... ERIGERON. 234.

Rays blue or white, many, linear; *tubular flowers*, outer row female ..... TRIMORPHA. 235.

Rays blue or white, 15 to 30, oblong; *tubular flowers* all hermaphrodite ..... EURYBIA. 232.

XXXIII. 208. CALENDULA. Brunsfel. *Marigold.*

Pericline simple; scales many, equal, awlshape, with 2 ribs; *calathides* radiated; *flowers* of the centre male, of the middle hermaphrodite, of the circumference female, fertile; *clinanthus* flat, pitted, naked; *akenium* bent, boatshape; *pappus* 0.—*Leaves* not divided; *calathides* solitary, terminal; *corollæ* orange-colour.

1. *Calendula arvensis.* *Field marigold.*

Leaves heartshape, lanceolate, embracing the stem, not toothed; *akenium* boatshape, muricated, turned inwards; the inner crowded together; the outermost upright, tailed.

Calendula arvensis, *Raii Hist.* 338; *Lin. S. P.* 1303.
Caltha officinalis, *Scopoli Carn.* 1040.

Cornfields and rubbish-hills; perennial; all the year; naturalized.

2. *Calendula officinalis.* *Shop marigold.*

Leaves oblong, lanceolate, toothed; lower leaves spathulate; *akenium* boatshape, muricated, incurved.

Calendula sativa, *Raii Hist.* 337.
Calendula simplici flore, *Ger. em.* 739, 6.
Calendula officinalis, *Lin. S. P.* 1304.
Single marigold.

On rubbish hills; annual or perennial; all the year; naturalized.

Corollæ cordial; also used to reduce saffron.

XXXIV. 209. HELIANTHUS. Linnæus. *Sunflower.*

Pericline hemisphærical, spreading; scales imbricate, herbaceous, tip patulous reflexed; *calathides* radiated; *flowers* of the centre hermaphrodite, bellied; of the circumference barren, ligulate, ovate, oblong, very large; *clinanthus* flat, broad, chaffy; chaffs linear, parted, short; *akenium* ovate, compressed; *pappus* chaffy; chaffs soft, deciduous.—*Herb* tall; *leaves* 3-ribbed; *calathide* terminal, very large; *corollæ* yellow.

Helianthus annuus. *Annual sunflower.*

Leaves heartshape, 3-ribbed, hirsute; *peduncles* thickened; *calathide* drooping.

Flos solis, *Raii Hist.* 334; *Park.* 297.
Flos solis major, *Ger. em.* 751.
Helianthus annuus, *Lin. S. P.* 1276.
Greater sunflower. Peru marigold.

Walls and dunghills; annual; June to August.

Stem from 6 inches to 14 feet high, upright, not branched; *calathide* solitary.

XXXV. 210. BIDENS. Cæsalpinus. *Bur-marigold.*

Bracteæ long, equal, weak, spreading; *pericline* cylindrical; scales nearly equal, edges scarious, soft, coloured; *calathides* flosculous; *flowers* all hermaphrodite; rarely radiated, flowers of the rays hermaphrodite or female; *clinanthus* convex, chaffy; chaffs similar and equal to the pericline-scales; *akenium* compressed, 3-angular; *pappus* awned; awns 2 or 4, rough, persistent, shorter than the akenium.—*Root-leaves* opposite, 5-cut; *calathides* axillary or terminal.

1. *Bidens tripartita.* *Three-parted bur-marigold.*

Leaves 3-parted; lobes lanceolate, toothed; *calathides* flosculous; *bracteæ* longer than the calathides; *akenium* spinous; spines upright, mostly 3.

Verbesina seu cannabina aquatica flore minus pulchro, elatior et magis frequens, *Raii Syn.* 187, 1.
Eupatorium cannabinum fœmina, *Ger. em.* 717, 1.
Eupatorium aquaticum duorum generum, *Park.* 595.
Bidens tripartita, *Lin. S. P.* 1165.
Water hemp. Bastard agrimony. Water agrimony.

Watery places; annual; August and September.

Root fusiform; *stem* 3 feet high, upright, bald; *leaves* 3-cut, pinnatifid; *calathides* solitary.—Dyes cloth yellow.

2. *Bidens cernua.* *Drooping bur-marigold.*

Leaves ovate, lanceolate, serrated, slightly connate at bottom; *calathides* terminal, solitary; *bracteæ* lanceolate, not cut; *akenium* spinous; spines 4, upright.

Verbesina pulchriore flore luteo, *Raii Syn.* 187, 2.
Eupatorium cannabinum fœmina, *Ger. em.* 711, 1; variety with the leaves whole.
Eupatorium aquaticum folio indiviso, *Park.* 596.

Watery places; annual; September.

Root branched; *stem* rough, branched; *leaves* simple.

β. *radiata.* *Calathides* radiated.

Verbesina pulchriore flore luteo, flore radiato, *Raii Syn.* 187, 2; var.
Coreopsis Bidens, *Lin. S. P.* 1281.

γ. *minima.* *Stem* simple, 6 to 9 inches high.

Verbesina minima, *Dillen in Raii Syn.* 188, 3.
Bidens tripartita β, *Hudson Fl. Angl.* 355.
Bidens minima, *Lin. S. P.* 1165.

XXXVI. 211. TANACETUM. Pliny. *Tansy.*

Pericline hemispherical; scales linear, imbricate, pressed close, tip membranaceous; *calathides* flosculous; *flowers* of the centre hermaphrodite, 5-lobed; of the circumference female, fertile, 3-lobed; *clinanthus* convex, naked, with raised spots; *akenia* uniform, 4 or 5-sided; *pappus* marginal, membranaceous, slightly 4-toothed.—*Leaves* pinnate; *calathides* corymbose, terminal; *odour* aromatic.

Tanacetum vulgare. *Common tansy.*

Leaves bipinnatifid, cut, serrated.

Tanacetum, *Raii Syn.* 188, 1; *Ger. em.* 650, 1.
Tanacetum vulgare, *Park.* 81; *Lin. S. P.* 1184.

Waysides, mountain pastures, also cultivated; perennial; July and August.

Root creeping; *stem* upright; *leaves* alternate, embracing the stem; *corymbus* flat.—*Leaves* bitter, very grateful, used to flavour puddings, omelets, and vinegar; preserves meat from the flesh-fly, by being laid or rubbed thereon; dye woollen green; corymbus and seeds excellent vermifuges.

β. *crispum.* *Leaves* curled at the edge.

Tanacetum foliis crispis, *Dillen in Raii Syn.* 188, 1 *.
Tanacetum crispum Anglicum, *Ger. em.* 650, 2.
Tanacetum crispum, *Park.* 81.
Curled tansy.

XXXVII. 212. ARTEMISIA. Hippocrates. *Mugwort.*

Pericline ovate or roundish; scales imbricate, oblong, pressed close; *calathides* flosculous; *flowers* all fertile; of the centre hermaphrodite, funnelshape, 5-lobed; of the circumference few, female, awlshape, not toothed; *clinanthus* conical, tuberculate, naked; *akenia* uniform, ovate; *pappus* 0. —*Stem* herbaceous, or undershrubby; *leaves* mostly many-cut.

1. *Artemisia campestris.* *Field mugwort.*

Stem procumbent, branched, rodlike; *root-leaves* woolly, pinnate, lobes 3-cut; stem-leaves bristleshape, bald; *calathides* ovate-globose, pendulous.

Abrotanum campestre, *Raii Syn.* 190, 1; *Ger. em.* 1106, 5; *Park.* 94.
Artemisia campestris, *Lin. S. P.* 1185.

Dry sandy heaths; perennial; August.

Root fusiform; *leaves* rather fleshy; *calathides* racemous; *flowers* brownish green.

2. *Artemisia cærulescens.* *Bluish mugwort.*

Stem rather shrubby, branched; *leaves* woolly, lanceolate, not in the least cut; root-leaves cut; *calathides* oblong, cylindrical, panicled, drooping.

Artemisia marina, *Ger. em.* 1104, 3.
Artemisia cærulescens, *Lin. S. P.* 1189.
Sea mugwort.

Sea-shores; perennial; August.

Root fibrous; *stem* round, panicled; *leaves* petioled, woolly on both sides; *racemes* simple, upright; *calathides* small.

3. *Artemisia vulgaris.* *Common mugwort.*

Stem herbaceous; *leaves* pinnatifid, cut, beneath tomentose, above blackish green; uppermost undivided, linear, lanceolate; *calathides* nearly sessile, oblong, upright; *pericline* tomentose.

Artemisia vulgaris, *Raii Syn.* 190, 1; *Park.* 90; *Lin. S. P.* 1188.
Artemisia, mater herbarum, *Ger. em.* 1103, 1.
Artemisia minor, *Park.* 91.

Ruins and waysides; perennial; August.

Root woody; *stem* upright, panicled; *leaves* petioled; *racemes* upright, simple, leafy; *calathides* ovate. — *Herb* aromatic, in decoction cures the ague; leaves in powder ʒj, four times a day, useful in hysteric fits, after assafœtida and ether had been tried in vain.

4. *Artemisia maritima.* *Sea mugwort.*

Stem herbaceous, branched, ascending; *twigs* drooping; *leaves* white, tomentose, many-cut; lobes flat, linear; *flowering-stems* simple, linear; *calathides* oblong, tomentose, sessile.

Absinthium marinum album, *Raii Syn.* 188, 2; *Ger. em.* 1099, 1.
Absinthium maritimum nostras, *Dillen in Raii Syn.* 189, 6.
Artemisia maritima, *Lin. S. P.* 1186.
English sea-wormwood. Roman wormwood, Herbsellers.

Sea-shores, also cultivated; perennial; August.

Root woody, creeping.—*Herb* aromatic, bitter, milder than wormwood.

β. *latifolia. Leaves* broad, woolly.

Absinthium maritimum seriphio Belgico simile, latiore folio, odoris grati, *Raii Syn.* 188, 3.

5. *Artemisia Gallica.* *French mugwort.*

Stem upright, branchy, tomentose; *branches* upright; *leaves* woolly, bipinnate; lobes linear, threadlike; stem-leaves pinnate, uppermost leaves linear; *calathides* oblong, nearly sessile, upright.

Absinthium seriphium tenuifolium marinum Narbonense, *Dillen in Raii Syn.* 189, 5.
Artemisia Gallica, *Willd. S. P.* 1834.
Artemisia maritima γ, *Smith Fl. Brit.* 864.
French sea-wormwood.

Sea-shores; perennial; August.

6. *Artemisia angustifolia.* *Narrow-leaved mugwort.*

Stem shrubby, stiff; *lower leaves* bipinnate; upper leaves pinnate, hairlike; *pericline* downy, hemispherical.

Abrotanum mas, *Ger. em.* 1105, 2.
Abrotanum mas vulgare, *Park.* 92.
Artemisia Abrotanum, *Lin. S. P.* 1188.
Southernwood.

Dunghills and cultivated; perennial; August.

XXXVIII. 213. ABSINTHIUM. Dioscor. *Wormwood.*

Pericline hemispherical; scales oblong, imbricate, pressed close; *calathides* flosculous; *flowers* all fertile; of the centre hermaphrodite, funnelshape, 5-lobed; of the circumference few, female, awlshape, not toothed; *clinanthus* conical, tuberculate, villous; *akenia* uniform, ovate; *pappus* 0. *Stem* herbaceous or undershrubby; *leaves* mostly many-cut.

Absinthium vulgare. *Common wormwood.*

Leaves woolly; root-leaves triply pinnatifid, blunt; upper leaves pinnatifid, pointed, lobes lanceolate; uppermost leaves undivided; *calathides* globose, peduncled, drooping.

Absinthium vulgare, *Raii Syn.* 188, 1; *Park.* 98; *Gærtner, Fr. et Sem.* 2, 393.
Absinthium latifolium sive Ponticum, *Ger. em.* 1096, 1.
Artemisia Absinthium, *Lin. S. P.* 1188.

Ruins, sea-shores, and cultivated; perennial; August.

Root woody; *stem* branched, panicled at top; *racemes* upright; *calathides* pedicelled, drooping, yellowish.—*Roots* warm, aromatic; leaves and flowers bitter, preserve beer and destroy its acidity, if already acquired; stomachic, render the milk of a suckling woman bitter, and also mutton if the sheep feed upon it; moistened with hot water and applied externally, are antiseptic, anodyne, and prevents the swelling and discolouration of bruises; ashes contain much subcarbonate of potash, very free from other salts.

XXXIX. 214. DIOTIS. Desfontaines. *Cottonweed.*

Pericline hemispherical; scales concave, imbricate, pressed close, tomentose; *calathides* flosculous; *flowers* all tubular, 5-cut, compressed below, dilated into two processes laterally embracing the ovary; *stigma* exserted; *clinanthus* convex, chaffy; chaffs oblong, concave, tip externally woolly; *akenium* oblong; *pappus* 0.—*Stem* tomentose, white; *leaves* alternate, flat, ribless; *calathides* terminal, corymbose; *corollæ* golden.

Diotis candidissima. *Very-white cottonweed.*

Leaves oblong, blunt, crenate, densely woolly; *peduncle* corymbose.

Gnaphalium maritimum, *Raii Syn.* 180, 1.
Gnaphalium marinum, *Ger. em.* 640.
Gnaphalium marinum seu Cotonaria, *Park.* 687.
Filago maritima, *Lin. S. P. ed.* 1, 927.
Santolina maritima, *Lin. Mant.* 1.
Athanasia maritima, *Lin. S. P.* 1182.
Diotis candidissima, *Desfont. Atlant.* 2, 261.
Sea cudweed. Chaffweed. Petty cotton.

Sandy sea-shores; perennial; August and September.

Root branched; *stem* decumbent; branches upright; *leaves* alternate, spreading.

XL. 215. CHRYSANTHEMUM. Dios. *Corn-marygold.*

Pericline hemispherical; scales imbricate, coriaceous, in several rows, edges scarious; *calathides* radiated; *flowers* all fertile; of the centre hermaphrodite, yellow; of the rays female, of the same colour; ligulæ reverse-heartshape, spreading; *clinanthus* convex, tessulated, naked, bald; *akenium* topshape, furrowed; *pappus* 0.

Chrysanthemum segetum. *Harvest corn-marygold.*

Leaves embracing the stem, above lobed, below toothed serrate.

Chrysanthemum segetum, *Raii Syn.* 182, 1; *Ger. em.* 743, 1; *Lin. S. P.* 1254.

Chrysanthemum segetum nostras, *Park.* 1370.

Yellow corn-flower. Golden corn-flower. Goldins. Buddle. Yellow ox-eye.

Sandy corn-fields; annual; June to August. Imported from Scandinavia with seed-corn.

Root fusiform; *stem* branched; *leaves* glaucous, smooth; *calathides* terminal, solitary.—Used to dye yellow.

β. *parviflorum.* *Flowers* smaller.

Chrysanthemum segetum nostras, folio glauco multi-scisso majus, flore minore, *Raii Syn.* 183, 2.

XLI. 216. LEUCANTHEMUM. Dios. *Maudlin-wort.*

Pericline hemispherical, scales linear, imbricate, in many series, edge membranaceous; *calathides* radiated; *flowers* of the disk hermaphrodite, yellow; of the rays female, of a different colour; ligulæ oblong, spreading; *clinanthus* convex, tessellated, bald, naked; *akenia* topshape, furrowed; *pappus* 0.

Leucanthemum vulgare. *Common maudlin-wort.*

Stem upright, branched; *leaves* embracing the stem, oblong, lanceolate, blunt, cut, pinnatifid at bottom; root-leaves spathulate, decurrent at the base into a petiole.

Leucanthemum vulgare, *Raii Syn.* 184, 1.
Bellis major, *Ger. em.* 634, 1.
Bellis major vulgaris seu sylvestris, *Park.* 528.
Chrysanthemum Leucanthemum, *Lin. S. P.* 1251.
Great daisy. Oxeye. Moonwort.

Fields and pastures; perennial; June and July.

Root fibrous; *leaves* dark green, shining; *calathides* solitary, terminal.—*Young leaves* eaten in salads.

XLII. 217. PYRETHRUM. Dioscorides. *Mayweed.*

Pericline hemispherical; scales imbricate, coriaceous, edge membranaceous; *calathides* radiated; *flowers* all fertile; of the centre hermaphrodite, yellow; of the rays female, of a different colour; ligulæ oblong, toothed; *clinanthus* convex, naked, tubercular; *akenia* uniform; *pappus* marginal, lobed or undivided.—*Stem* diffuse, branched; *leaves* much cut; *calathides* solitary, terminal, scentless.

1. *Pyrethrum inodorum.* *Scentless mayweed.*

Stem branched, spreading; *leaves* sessile, pinnatifid, lobes linear, threadlike, 2 or 3-parted; *pappus* not divided.

Chamæmelum inodorum annuum humilius, foliis obscure virentibus, *Dillen in Raii Syn.* 186, 6.
Chrysanthemum inodorum, *Lin. S. P.* 1253.
Matricaria inodora, *Huds. Fl. Angl.* 372.
Pyrethrum inodorum, *Engl. Bot.* 676.

Fields and pastures; annual; August and September.

Root fusiform; *leaves* lyrate, pinnatifid; *calathides* solitary, large; *peduncle* naked; *pericline* bald; scales blackish on the edge.

β. *duplicatum.* *Flowers* all ligulate.

2. *Pyrethrum maritimum.* *Sea mayweed.*

Stem branched, spreading; *leaves* sessile, bipinnatifid; lobes linear, blunt, fleshy, bald, 3-cut; *pappus* lobed.

Chamæmelum maritimum perenne humilius, foliis brevibus crassis, obscure virentibus, *Dillen in Raii Syn.* 186, 7.
Matricaria maritima, *Lin. S. P.* 1256.
Matricaria inodora γ, *Huds. Fl. Angl.* 373.
Pyrethrum inodorum, *Smith Fl. Brit.* 901.
Chrysanthemum maritima, *Pers. Syn.* 462.

Sandy and rocky sea-shores; perennial; July.

Root woody; *stem* tufted, shining; *leaf-lobes* short; *calathides* terminal; *pericline* bald; scales black on the edges.

XLIII. 218. MATRICARIA. Brunsfel. *Feverfew.*

Pericline hemispherical; scales imbricate, coriaceous; edges scariose, torn; *calathides* radiated; *flowers* all fertile; of the centre hermaphrodite, of the rays female, of a different colour; ligulæ reverse ovate, very short, rarely wanting; *clinanthus* flat, naked; *akenia* furrowed; *pappus* membranaceous, marginal, 5-lobed.—*Stem* upright; *leaves* petioled, pinnate; *calathides* corymbose, downy.

Matricaria vulgaris. *Common feverfew.*

Stem upright; *leaves* petioled, compound, flat; leaflets ovate, incised; *peduncles* branched, corymbose.

Matricaria, *Raii Syn.* 187, 1; *Ger. em.* 652, 1.
Matricaria vulgaris, *Park.* 83.
Matricaria Parthenium, *Lin. S. P.* 1255.
Pyrethrum Parthenium, *Smith Fl. Brit.* 900.

Old walls and hedges; perennial; June and July.

Root fibrous, branched; *leaves* rather woolly.—*Plant* bitter, aromatic, and yields an essential oil by distillation.

XLIV. 219. CHAMOMILLA. Tragus. *Wild-camomile.*

Pericline hemispherical; scales imbricate, in a few series, herbaceous, pointed; *calathides* radiated; *flowers* all fertile; of the centre hermaphrodite; of the rays female, of a different colour; *clinanthus* long, conical, naked, dotted; *akenium* topshaped; *pappus* 0.—*Stem* much branched; *leaves* sessile, dark green, bald; *calathides* solitary, terminal.

Chamomilla vulgaris. *Common wild-camomile.*

Leaves lobed, pinnate; leaflets linear, not cut or lobed; *pericline* rather flat, bald; *scales* rather blunt.

Chamæmelum, *Raii Syn.* 184, 1; *Ger. em.* 754, 1, fig.
Chamæmelum vulgare, *Park.* 85.
Matricaria Chamomilla, *Lin. S. P.* 1256.
Bitter camomile.

Fields, waysides and dunghills; annual; May and June.

Stem upright, bald; *calathides* many; *pericline-scales* white.—May be used for Roman camomile, with which it is confounded by the old authors; an infusion of it is used in Finland in phthisis.

XLV. 220. BELLIS. Pliny. *Daisy.*

Pericline hemispherical; scales many, equal, in 2 series; *calathides* radiate; *flowers* all fertile; of the centre hermaphrodite, funnelshape, 5-cut; of the rays female, many, of a different colour; ligulæ slender, lanceolate; *clinanthus* conical, naked, tubercled; *akenium* heartshape, compressed, hairy; *pappus* 0.

Bellis perennis. *Perennial daisy.*

Scape 1-flowered; *leaves* reverse ovate, crenate, veined.

Bellis sylvestris minor, *Raii Syn.* 184, 1.
Bellis minor sylvestris, *Ger. em.* 636, 4.
Bellis minor sylvestris simplex, *Park.* 530.
Bellis perennis, *Lin. S. P.* 1248.
Common daisy. Days-eye. Bruisewort.

Fields and pastures; perennial; April to September.

Root creeping; *leaves* depressed.—*Roots* pungent, boiled in milk to stint the growth of puppies, also externally in scrofula; *leaves* slightly acrid.

XLVI. 221. CHAMÆMELUM. Theophrast. *Camomile.*

Pericline hemispherical; scales nearly equal, narrow, imbricate, in 2 or 3 series; *calathides* radiated; *flowers* all fertile; of the centre hermaphrodite; of the rays female, of a different colour; ligulæ 3 times as long as broad; *clinanthus* conical, chaffy; chaffs lanceolate, membranaceous, keeled; *akenium* topshaped, 4-sided; *pappus* marginal.

1. *Chamæmelum nobile.* *Noble camomile.*

Stem branched at bottom, decumbent; *leaves* bipinnate; lobes 3-parted, linear, awlshape, slightly villous; *chaffs* of the clinanthus shorter than the corollæ.

Chamæmelum odoratissimum repens flore simplici, *Raii Syn.* 185, 2.
Chamæmelum Romanum, *Ger. em.* 755, 4.
Anthemis nobilis, *Lin. S. P.* 1260.
Roman camomile.

Sandy pastures; perennial; August and September.

Root woody; *peduncles* terminal, solitary, naked.—Leaves and flowers bitter, nauseous, with a strong smell, not disagreeable, antiseptic externally; flowers in infusion stomachic, antispasmodic, useful in calculous cases; and in large doses emetic; in powder febrifuge, even where bark has failed.

β. *duplicatum.* *Flowers* all ligulate.

γ. *nudum.* *Flowers* of the circumference wanting.

Chamæmelum luteum capitulo aphyllo, *Dillen in Raii Syn.* 185, 2.*
Chamæmelum nudum odoratum, *Ger. em.* 754, 2.

2. *Chamæmelum arvense.* *Corn camomile.*

Stem much branched, upright; *leaves* bipinnate, lobes linear, lanceolate, downy; *clinanthus* conical; *chaffs* longer than the corollæ.

Chamæmelum inodorum, *Dillen in Raii Syn.* 185, 4.
Anthemis arvensis, *Lin. S. P.* 1261.
White oxeye.

Ruins and sandy fields; annual or biennial; June, July.

Calathides peduncled, solitary, terminal.—*Plant* scentless; *flowers* scented.

XLVII. 222. MARUTA. Cassine. *Mathes.*

Pericline hemispherical; scales imbricate, slightly scarious at the edge; *calathides* radiated; *flowers* of the centre hermaphrodite; of the rays female, of a different colour; *calathides* long, conical, naked at bottom, chaffy above; chaffs bristlelike, shorter than the corollæ; *akenium* hairy, topshaped, tubercular above; *pappus* 0.

Maruta fœtida. *Stinking mathes.*

Leaves bipinnatifid, bald; leaflets awlshape, 3-parted.

Chamæmelum fœtidum, *Raii Syn.* 185, 2.
Cotula fœtida, *Ger. em.* 757, 1.
Anthemis Cotula, *Lin. S. P.* 1261.
Maruta, *Bullet. Philom.* 1819.
Stinking camomile. Mayweed.

Fields; annual; June and July.

Root tortuous; *stem* much branched; *leaves* light green. —*Calathides* rubbed between the fingers smell very disagreeable; *herb* blisters the skin of reapers, and of children who gather it.

XLVIII. 223. ANTHEMIS. Turner. *Anthemis.*

Pericline hemispherical; scales lanceolate, membranaceous, hairy; tips torn, plumose; *calathides* radiated; *flowers* of the centre hermaphrodite; of the circumference female; ligulæ much longer than broad; *clinanthus* flat or slightly convex, chaffy; chaffs long, lanceolate, keeled, membranaceous, sometimes as long as the corollæ; tips awlshape; *akenium* 4-sided, topshaped; *pappus* marginal, membranaceous.

a. *Corollæ of the centre yellow, of the rays white.*

1. *Anthemis maritima.* *Sea anthemis.*

Stem prostrate; *leaves* bipinnatifid, fleshy; beneath convex, hairy; above flat; lobes pointed; *chaffs* longer than the corollæ.

Chamæmelum maritimum latifolium ramosissimum, flore albo, *Dillen in Raii Syn.* 186, 8.
Anthemis maritima, *Lin. S. P.* 1259.

Rocks by the sea; annual; July.

Leaves sessile; *calathides* solitary, terminal.

b. *Corollæ all yellow.*

2. *Anthemis tinctoria.* *Dyeing anthemis.*

Stem upright, branched; *leaves* bipinnatifid, serrate, flat, beneath tomentose; *pappus* not divided; *chaffs* as long as the flowers.

Buphthalmum vulgare, *Raii Syn.* 183, 1; *Ger. em.* 747, 3.
Buphthalmum Matthioli, sive vulgare millefolii foliis, *Park.* 1370.
Anthemis tinctoria, *Lin. S. P.* 1263.
Yellow oxeye. Common oxeye.

Rocks and mountains; perennial; July and August.

Stem 18 inches high.—*Flowers* yield a very clear and good yellow dye.

XLIX. 224. ACHILLEA. Theophrastus. *Yarrow.*

Pericline ovate; scales slender, pressed close, imbricate; calathides radiated; *flowers* all fertile; of the centre hermaphrodite, tubular; of the rays female; ligulæ ovate, broader than long; tip repand, 3-toothed; *clinanthus* flat, chaffy; chaffs linear, shorter than the pericline; *akenium* elliptical; *pappus* 0.

a. *Corollæ all yellow.*

1. *Achillea tomentosa.* *Clothlike yarrow.*

Leaves bipinnatifid, villose; leaflets very much crowded; lobes linear, lanceolate, not in the least cut, pointed; *corymbus* compound.

Achillea tomentosa, *Willd. S. P.*

Mountains; perennial; August and September.

Stem 9 inches high.

b. *Corollæ of the centre yellow, of the rays white.*

2. *Achillea millefolia.* *Many-leaved yarrow.*

Leaves bipinnate; leaflets blunt; lobes awlshape, toothed.

Millefolium vulgare, *Raii Syn.* 183, 1; *Park.* 693.
Millefolium terrestre vulgare, *Ger. em.* 1072, 1.
Achillea Millefolium, *Lin. S. P.* 1267.
Common yarrow. Milfoil. Nose-bleed.

Fields and pastures; perennial; June to August.

Root creeping; *stem* upright; *lobes* of the leaves very numerous, hairy underneath; *calathides* crowded, small, white.—*Flowers* yield an essential oil; infusion of the flowering herb stimulant, stomachic.

β. *rosea.* *Calathides* rose-colour or nearly crimson.

Millefolium flore rubro, *Ger. em.* 1072, 2.

3. *Achillea serrata.* *Saw-leaved yarrow.*

Leaves linear, lanceolate, sessile, downy, lobed at bottom; serratures deep, acute; *corymbus* nearly simple.

Achillea serrata, *Retz. Obs. Bot.* 2, 25.

Mountains in Derbyshire; perennial; July.

Stem upright; *flowers* yellowish-white, odoriferous.

4. *Achillea sylvestris.* *Wild yarrow.*

Leaves lanceolate, pointed; serratures equal, acute, mucronate.

Ptarmica, *Raii Syn.* 183, 1; *Ger. em.* 606, 1.
Ptarmica vulgaris, *Park.* 859.
Achillea Ptarmica, *Lin. S. P.* 1266.
Sneezewort. Goose-tongue. Wild pellitory.

Woods and damp hedges; perennial; June to August.

Root creeping; *calathides* peduncled, white.—*Root* hot, acrid, sialogogue; *leaves* in powder errhine; *herb* chewed acrid, sialogogue; young tops a warm spring salad.

β. *plena.* *Corollæ* all ligulate.

L. 225. ANTENNARIA. Gærtner. *Cats-foot.*

Pericline ovate; scales lanceolate, pointed, imbricate, scarious, coloured; *calathides* flosculous, unisexual; *clinanthus* pitted, naked.—MALE. *Anthers* 2-bristled at the base; *stigma* truncated; *pappus* pencil-shape, or thickened at the tip.—FEM. *Corollæ* threadshape, limbs small; *pappus* hair-like.—*Herb* dioicous, tomentose, white, woolly; *leaves* flat; *calathides* corymbose, rarely solitary.

1. *Antennaria montana.* *Mountain cats-foot.*

Runners procumbent; *stem* not branched; *leaves* radical, spathulate; *corymbus* simple, terminal, contracted; *outer pericline-scales* long, blunt.

Elichrysum q. Gnaphalium montanum album Gerardi (640, 4), *Raii Syn.* 181, 1. The male plant.
Elichrysum q. Gnaphalium longiore folio et flore Casp. Bauhini, *Dillen in Raii Syn.* 182, 1.* The female.
Gnaphalium montanum, sive Pes cati, *Park.* 690.
Gnaphalium dioicum, *Lin. S. P.* 1199.
Antennaria dioica, *Gærtner Sem. et Fr.* 2, 410.
Mountain cotton-weed. Mountain cudweed.

Dry mountain-pastures; perennial; June and July.

Root creeping; *runners* leafy, woolly; *leaves* rather naked above, tomentose beneath.

β. *lanata.* *Leaves* woolly on both sides.

γ. *rubra.* *Calathides* reddish.
Gnaphalinm montanum purpureum, *Ger. em.* 640, 5.

2. *Antennaria margaritacea.* *Pearly cats-foot.*
Stem branched above; *leaves* linear, lanceolate, pointed, alternate; *corymbus* conglomerate.

Elichrysum q. Gnaphalium Americanum Gerardi (641, 8), *Raii Syn.* 182, 2.
Argyrocome seu Gnaphalium Americanum, *Park. Par.* 374.
Gnaphalium margaritaceum, *Lin. S. P.* 1198.
American live-for-ever. American cudweed. Pearly everlasting.

Damp fields; perennial; August. Naturalized.
Root creeping; *stem* woolly; *leaves* slightly revolute, greenish above, densely tomentose beneath.

LI. 226. GNAPHALIUM. Dioscorides. *Cudweed.*
Pericline cylindrical; *scales* linear, shining, membranaceous, coloured, as long as the flower; *calathides* flosculous; *flowers* of the centre hermaphrodite, few; of the circumference many, threadshape; *clinanthus* pitted, naked; *pappus* sessile, rough, hairlike, deciduous.

1. *Gnaphalium luteo-album.* *Pale-yellow cudweed.*
Stem herbaceous, upright, not branched; *leaves* slightly stem-clasping, swordshape, repand, both sides tomentose; lower leaves blunt; upper pointed; *corymbus* conglomerate.

Elichrysum sylvestre latifolium capitulis conglobatis, *Raii Syn.* 182, 3.
Gnaphalium oblongo folio, *Ger. em.* 643, 13.
Gnaphalium luteo-album, *Lin. S. P.* 1196.
Long-leaved cudweed. Jersey live-long.

Sandy places and dry walls; annual; July and August.
Root small; *stem* diffuse at bottom; *leaves* not in the least cut; *pericline* pale yellow.

2. *Gnaphalium supinum.* *Supine cudweed.*
Stem herbaceous, not branched, procumbent or very short; *lower leaves* pointed, tomentose; *calathides* capitate.

Gnaphalium supinum, *Lin. Syst. Nat. ed.* 12, 234.
Gnaphalium alpinum, *Lightfoot Fl. Scot.* 470.
Dwarf cudweed.

Micaceous alps; perennial; July.
Root creeping; *stem* 6 inches high; *leaves* slender; *calathides* racemose, upright; upper sessile; lower pedicelled.

3. *Gnaphalium sylvaticum.* *Wood cudweed.*

Stem upright, not branched, tomentose; *leaves* linear, narrow at both ends, woolly on both sides; *calathides* terminal and axillary, sessile, spiked.

Gnaphalium sylvaticum, *Lin. S. P.* 1200.
Gnaphalium fuscum, *Lamarcke Encycl. Meth.* 2, 757.
Gnaphalium Norwegicum, *Retz Prod.* 193.
Gnaphalium fuscatum, *Persoon Syn.* 2, 421.

Mountains; perennial; August.

Root fibrous; *stem* solitary; *leaves* pointed; *spike* slightly branched, dense; *pericline* blackish.

4. *Gnaphalium rectum.* *Upright cudweed.*

Stem upright, not branched; *leaves* linear, lanceolate, serrate, tomentose, white, rather naked above; *calathides* panicled; *panicle* stiff, compound, leafy.

Gnaphalium Anglicum, *Raii Syn.* 180, 2; *Ger. em.* 639, 1.
Gnaphalium Anglicum vulgare majus, *Park.* 685.
Gnaphalium sylvaticum, *Huds. Fl. Angl.* 366.
Gnaphalium rectum, *J. Bauhin Hist. Pl.* 3, 1, 160; *Eng. Bot.* 124.
English cudweed. English live-long.

Woods, hedges, and pastures; perennial; August.

Root woody; *stem* 2 feet high, panicled; *panicle* long, imbricate, whitish; *pericline* flesh-brown.

5. *Gnaphalium uliginosum.* *Bog cudweed.*

Stem much branched, diffuse, woolly; *leaves* linear, lanceolate, cut at bottom, tomentose on both sides; *calathides* terminal, corymbose, crowded.

Gnaphalium longifolium humile ramosum capitulis nigris, *Raii Syn.* 181, 6.
Gnaphalium vulgare, *Ger. em.* 639, 2.
Filago minor, *Park.* 686.
Gnaphalium uliginosum, *Lin. S. P.* 1200.
Common cudweed. Chaff-weed. Petty cotton. Cotton-weed.

Damp shady places; annual; August.

Stem branched at bottom; *pericline* brownish yellow.

LII. 227. FILAGO. Dodonæus. *Chafeweed.*

Pericline conical, pyramidical; scales few, lanceolate, of one colour, not sphacelated, longer than the flowers; *calathide* flosculous; *flowers* all tubular: of the centre 2 or 3, hermaphrodite, 4-cut, style short, pappus hairlike: of the sides many, female, base swollen, limb 4-cut, upright, style long, pappus hairlike: of the circumference 5 or 6, female, tube very slender, 2-cut, style long, pappus 0;

clinanthus awlshape, naked above, chaffy below, chaffs linear, like the scales of the pericline, enclosing the akenia; *akenium* ovate; *pappus* hairlike, sessile, rough, deciduous, or 0.—*Stem* forked, branched; *calathides* aggregated into a calathiphore; *calathiphore* ovate, in the forks and terminal.

1. *Filago minima.* *Least chafeweed.*

Stem upright, branched; *leaves* lanceolate, pointed, flat, woolly; *calathides* conical, crowded, and solitary, axillary and terminal.

Gnaphalium minimum, *Raii Syn.* 181, 4.
Filago minor, *Ger. em.* 641, 9.
Gnaphalium montanum, *Hudson Fl. Angl.* 362.
Gnaphalium montanum β, *Lamarcke Enc. Meth.* 2, 760.
Filago montana, *Sibthorp Fl. Ox.* 262, not of Linnæus.
Least cudweed.

Sandy places; annual; July.

Leaves upright, pressed close, short, both sides woolly.

2. *Filago montana.* *Mountain chafeweed.*

Stem upright, forked; *leaves* linear, lanceolate, pressed close, tomentose; *calathides* crowded, axillary or solitary.

Filago montana, *Lin. S. P.* 1312.
Gnaphalium montanum, *Willd. S. P.* 1896.

Sandy places; annual; July.

Stem upright; 9 inches high, much branched, larger and more woolly than the preceding.

3. *Filago filiformis.* *Threadlike chafeweed.*

Stem upright, forked; *leaves* linear, pointed, greyish, *calathides* crowded, axillary in the forks, and terminal.

Gnaphalium parvum ramosissimum foliis angustissimis polyspermon, *Raii Syn.* 181, 5.
Filago gallica, *Lin. S. P.* 1312.
Gnaphalium gallicum, *Hudson Fl. Angl.* 361.
Grass-leaved cudweed.

Sandy fields; annual; July and August.

Stem simple at bottom, much branched above; *leaves* revolute, twisted, both sides woolly.

4. *Filago vulgaris.* *Common chafeweed.*

Stem upright, forked; *leaves* linear, lanceolate, pointed, tomentose; *calathides* many; *calathiphore* globular, lateral and terminal.

Gnaphalium minus, seu Herba impia, *Raii Syn.* 180, 3; *Park.* 685.
Filago seu Herba impia, *Ger. em.* 642, 10.
Gnaphalium Germanicum, *Hudson Fl. Angl.* 362.
Filago Germanica, *Lin. S. P.* 1311.
Gnaphalium dichotomum, *Stokes Bot. Med.* 203.
Lofgia, *Cassine, Journ. Philom.* 1819.
Herb impious. Wicked cudweed. Childing cudweed.

Fields and waysides; annual; July and August.

Stem 2 feet high; *leaves* stem-clasping, both sides woolly; *flowers* the younger overtop the elder.—Used in the bloody flux both of man and beast.

LIII. 228. CONYZA. Hippocrates. *Ploughmans-spikenard.*

Pericline ovate, cylindrical; scales lanceolate, outer scales leaflike, tip bent back, spreading; inner cartilaginous, straight, fringed; *calathides* slightly radiated; *flowers* all fertile; of the centre hermaphrodite, funnelshape, 5-cut; of the rays female, very small, 3-cut; ligulæ very short, slender; *clinanthus* flat, tubercular, rough; *akenium* angular, furrowed; *pappus* hairlike, rough.—*Herb* downy; *leaves* not cut; radical petioled; *calathides* corymbose, crowded; *corollæ* yellow.

Conyza squarrosa. *Rough ploughmans-spikenard.*

Leaves ovate, lanceolate, downy; upper leaves oblong, lanceolate, not cut.

Baccharis Monspeliensium, *Raii Syn.* 179, 1; *Ger. em.* 792; *Park.* 114.
Conyza squarrosa, *Lin. S. P.* 1205.
Great Fleabane.

Chalky pastures and waysides; biennial; July and Aug.

Stem 3 feet high; *radical leaves* ovate, crenate.—*Leaves* scented, bitter and acrid.

LIV. 229. PULICARIA. Gaza. *Fleabane.*

Pericline roundish; scales imbricate, nearly equal, all linear, pointed, tips spread out; *calathides* radiated; *flowers* of the centre hermaphrodite; of the circumference female, many; ligulæ slender, linear, 3-toothed, recurved; *anthers* with a long, bristlelike basillary appendix; *clinanthus* honeycombed; cells fringed; *akenium* rounded, hirsute; *pappus* double; outer membranaceous, toothed; inner hairlike, rays few, longer than the seed, deciduous.—*Herb* downy; *leaves* stem-clasping; *pericline* downy; *branches* longer than the main stem.

1. *Pulicaria uliginosa.* *Marsh fleabane.*

Stem upright, panicled; *leaves* stem-clasping, oblong, waved, villous; *peduncles* opposite to the leaves; *calathides* rather globose; rays very short.

Conyza minor, *Raii Syn.* 174, 1.
Conyza minima, *Ger. em.* 482, 4.
Inula Pulicaria, *Lin. S. P.* 1238.
Aster pulicarius, *Scop. Carniola*, 1080.
Inula uliginosa, *Sibthorp. Fl. Ox.* 206.
Inula cylindrica, *Withering Bot. Arr.* 731.
Pulicaria vulgaris, *Gærtn. Sem. et Fr.* 2, 461.
Small fleabane. Dwarf fleabane.

Damp sandy heaths; annual; September.

Root fusiform; *stem* much branched; *rays* longer than the pericline, rarely 0.

2. *Pulicaria dysenterica.* *Bloody-flux fleabane.*

Stem downy, panicled; side branches spread, and longer than the main stem; *leaves* stem-clasping, heartshape, oblong, naked, serrate, hairy beneath; *pericline-scales* bristle-like.

Conyza media, *Raii Syn.* 174, 1; *Ger. em.* 482, 3.
Insula dysenterica, *Lin. S. P.* 1237.
Aster dysentericus, *Scop. Carniol.* 1079.
Common flea-wort. Herb Christopher. Middle fleabane.

Watery places; perennial; August to October.

Root creeping; *stem* upright; leaves spreading; *calathides* racemose, terminal; *rays* twice as long as the pericline.—*Odour* soapy; useful in dysentery.

LV. 230. INULA. Pliny. *Elecampane.*

Pericline hemispherical; scales imbricate; inner scales linear, slender, equal, scariose; outer ovate, unequal, weak; *calathides* radiated; *flowers* of the centre funnelshape, hermaphrodite; of the rays very numerous, female, yellow; ligulæ linear; *basillary appendix* to the anther long, slender; *clinanthus* flat, bald, pitted, rather smooth; *akenium* 4-sided, streaked, bald; *pappus* hairlike, rather rough, longer than the akenium.

Inula grandiflora. *Great-flowered elecampane.*

Leaves embracing the stem, ovate, slightly toothed, wrinkled; tomentose beneath.

Helenium, *Raii Syn.* 176, 1; *Ger. em.* 793.
Helenium sive Inula campana, *Park.* 674.
Inula Helenium, *Lin. S. P.* 1236.
Aster Helenium, *Scopoli Carn.* 1078.
Scab wort. Horse-heal.

Damp fields and pastures; perennial; June to August.

Root thick, fleshy; *stem* upright, 3 feet high; *radical leaves* petioled; *calathides* solitary, terminal, very large.—*Root* in infusion pectoral, used in the hooping-cough; in decoction cures the scab in sheep; yields a peculiar principle, inulin, resembling starch and gum.

LVI. 231. ERITHEIS. *Golden-samphire.*

Pericline hemispherical; scales unequal, imbricate, awl-shape, fleshy, outer ones weak, become all reflexed; *calathides* radiated; *flowers* all fertile: of the centre hermaphrodite; corollæ membranaceous, lobes coriaceous: of the rays many, female, yellow; ligulæ linear, 3-toothed; *basillary appendix* of the anthers very short; *style* much swollen at the base; *clinanthus* flat, honeycombed, bald; *akenium* compressed, hispid; *pappus* simple, hairlike, rough.—*Herb* perennial, bald, fleshy; *pericline* bald; *corollæ* yellow.

Eritheis maritima. *Sea golden-samphire.*

Leaves linear, fleshy; tip 3-cut.

Aster maritimus flavus, Crithmum chrysanthemum dictus, *Raii Syn.* 174, 1.
Crithmum chrysanthemum, *Ger. em.* 533, 3; *Park.* 1287.
Inula crithmoides, *Lin. S. P.* 1240.
Inula crithmifolia, *Hull Br. Fl.* 185.
Aster palustris, *Lamarck Fl. Fr.* 214.

Muddy sea-shores; perennial; August.

Root creeping; *stem* upright or decumbent, mostly simple; *leaves* crowded; *peduncles* corymbose, terminal, scaly; *calathides* large.

LVII. 232. EURYBIA. Cassine. *Hogs-beans.*

Pericline hemispherical; scales imbricate, unequal, pressed close, coriaceous, without an appendix; *calathides* radiated; *flowers* all fertile; of the centre hermaphrodite; of the rays many, female; ligulæ oblong, blue or white; *clinanthus* flattish, dotted, bald; *akenia* uniform, compressed; *pappus* simple, hairlike, rather rough.—*Herb* perennial, smooth.

Eurybia maritima. *Sea hogs' beans.*

Stem bald, corymbose; *leaves* linear, lanceolate, fleshy, 3-ribbed; lower leaves slightly serrate at the apex; *pericline-scales* lanceolate, blunt.

Aster maritimus cœruleus Tripolium dictus, *Raii Syn.* 175, 2.
Tripolium vulgare majus, et minus, *Ger. em.* 413, 1 *et* 2.
Tripolium majus sive vulgare, et minus, *Park.* 673.
Aster Tripolium, *Lin. S. P.* 1226.
Sea starwort. Blue daisies. Blue camomile.

Salt marshes; perennial; August aud September.

Root fibrous; *stem* upright; *leaves* not cut, lower leaves petioled; *calathides* large; *pericline-scales* slightly fringed.

β. *flosculosa.* *Calathides* flosculous; rays 0.

LVIII. 233. SOLIDAGO. Brunsfel. *Golden-rod.*

Pericline ovate; scales imbricate, oblong, lanceolate, unequal, pressed close, becoming spread open, edge membranaceous; *calathides* radiated; *flowers* all fertile; of the centre funnelshape, hermaphrodite; of the rays 5 or 10, yellow, female; ligulæ oblong, toothed; *clinanthus* flat, small, pitted, naked; *akenium* roundish, hairy; *pappus* hairlike, rough.—*Herb* perennial; *calathides* small, racemose.

Solidago vulgaris. *Common golden-rod.*

Stem downy, generally branched; *upper leaves* lanceolate, narrow at both ends; lower elliptical, hairy; *racemes* upright; *calathides* crowded, longer than the peduncle.

Virga aurea, *Raii Syn.* 173, 1.
Virga aurea vulgaris, *Park.* 542.
Solidago Virga-aurea, *Lin. S. P.* 1235.

Woods and hedges; perennial; July to September.

Stem generally panicled; *radical leaves* petioled.—Formerly in great esteem as an astringent and styptic herb, and sold dry as imported from Italy at half a crown an ounce; but when found to be a native of Hampstead-heath fell into contempt, on which change in its value Gerarde is very pleasant.

β. *dentata.* *Stem* branched; *leaves* indistinctly serrated.

Virga aurea, *Ger. em.* 430, 1.

γ. *incurva.* *Stem* simple, serpentine; *leaves* lanceolate; *calathides* spiked.

δ. *paniculata.* *Stem* simple, straight; *leaves* lanceolate, tomentose; upper leaves rarely sessile; lower petioled; *calathides* panicled.

Virga aurea montana, folio subangusto subincano, flosculis conglobatis, *Raii Syn.* 177, 4.
Solidago cambrica, *Hudson Fl. Angl.* 367.

ε. *Lapponica.* *Stem* simple, straight; *root leaves* petioled, petioles bordered; upper leaves lanceolate; *calathides* spiked.

Solidago Lapponica, *With. Bot. Arr. ed.* 5, 897.

LIX. 234. ERIGERON. Theophrastus. *Erigeron.*

Pericline ovate; scales imbricate, unequal, linear, lanceolate, becoming deflected, edges membranaceous; *calathides* radiated; *flowers* all fertile; of the centre tubular, hermaphrodite, yellow; of the rays numerous, in a single row, female; ligulæ very slender, blue or white; *clinanthus* convex, pitted, rough; *akenium* angular, silky; *pappus* hairlike, rough.—*Herb* rough; *calathides* panicled.

Erigeron Canadense. *Canada erigeron.*

Stem hirtous, panicled; *leaves* lanceolate, fringed; lower leaves toothed.

Conyza Canadensis annua, acris, alba, linariæ foliis, *Raii Syn.* 175, 1.
Erigeron Canadense, *Lin. S. P.* 1210.
Canada fleabane. White golden rod.

Cultivated places; annual; August to September; naturalized.

Stem upright, firm; *leaves* pointed; *calathides* small. —*Fibre* has been made into excellent paper.

LX. 235. TRIMORPHA. Cassine. *Trimorphe.*

Pericline ovate; scales imbricate, lanceolate, awlshape, acute; *calathides* radiated; *flowers* all fertile; of the centre tubular, 5-cut, hermaphrodite, yellow; of the rays female, in two rows; inner row tubular, 5-cut; outer row ligulate, very numerous; ligulæ linear, blue or white; *clinanthus* flat, pitted; *akenium* compressed, hispid; *pappus* hairlike, longer than the akenium.

1. *Trimorpha acre.* *Sharp trimorphe.*

Stem racemose; *peduncles* alternate, 1-flowered; *leaves* lanceolate, ligulate, sessile; *pappus* reddish, twice as long as the akenium.

Aster arvensis cæruleus acris, *Raii Syn.* 175, 3.
Conyza cærulea acris, *Ger. em.* 484, 10.
Conyza odorata cærulea, *Park.* 126.
Erigeron acre, *Lin. S. P.* 1211.
Blue fleabane.

Chalky hills; perennial; July and August.

Root branched; *stem* upright, 2 feet high; *leaves* spread, sessile; root-leaves petioled, serrated; *pericline* hirsute; *flowers* of the rays upright.

2. *Trimorpha alpina.* *Alpine trimorphe.*

Stem 1 to 4-flowered; *leaves* blunt, villous beneath; *pericline* slightly hirsute; *flowers* of the rays spreading; *pappus* reddish, the length of the akenium.

Erigeron alpinum, *Lin. S. P.* 1212.

Alpine rocks perennial; July.

Root fibrous; *stems* many, mostly without branches; *leaves* sessile, fringed; *calathides* solitary; *flowers* of the rays purplish blue; of the centre yellow.

3. *Trimorpha uniflora.* *One-flowered trimorphe.*

Stem 1 to 4-flowered; *leaves* blunt, hirsute; *pericline* woolly; *flowers* of the rays erect, tubular; *pappus* reddish, the length of the akenium.

Erigeron uniflorum, *Lin. S. P.*

Alpine places; perennial; July.

Flowers of the centre deep purple; of the rays white.

LXI. 236. CHRYSOCOMA. Dioscorides. *Chrysocome.*

Pericline hemispherical or ovate; scales linear, imbricate, convex on the back, herbaceous; *calathides* flosculous; *flowers* all tubular, 5-cut, hermaphrodite; *style* scarcely projecting; lobes ovate; *clinanthus* flat, pitted; edges of the pitts rough, toothed; *akenium* oblong, villous; *pappus* bristlelike, rough; deeply denticulated.

Chrysocoma nuperum. *Modern chrysocome.*

Stem herbaceous; *leaves* linear, bald; *pericline-scales* weak.

Linosyris nuperorum Lobelii, *Ger. em.* 553, 9.
Chrysocoma Linosyris, *Lin. S. P.* 1178.
Golden star-fashioned toadflax.

Sea-cliffs; perennial; September and October.

Stem a foot long, upright; *panicle* branched; *calathides* solitary, terminal; *peduncles* leafy; *corollæ* gold-yellow.

LXII. 237. DORONICUM. Brunsfel. *Leopards-bane.*

Pericline hemispherical; scales equal, linear, pointed in 2 series; *calathides* radiated; *flowers* all fertile; of the

centre hermaphrodite; of the rays many, female, ligulate; ligulæ linear, spreading; *clinanthus* conical, honeycombed, cells fringed; *akenia* difform; of the centre reverse ovate, hirsute; pappus bristlelike, toothed, rough; of the rays topshape, furrowed, bald.

Doronicum cordifolium. *Heart-leaved leopard's-bane.*

Stem hirsute; *leaves* toothed; root-leaves heartshape, with long petioles; middle spathulate heartshape; upper roundish heartshape.

Doronicum majus officinarum, *Ger. em.* 759, 2.
Doronicum Pardalianches, *Lin. S. P.* 1247.
Doronicum cordifolium, *Stokes Bot. Mat. Med.* 233.
Great leopard's-bane.

Mountainous fields and pastures; perennial; May.

Root tuberous, creeping; *calathides* terminal, solitary, large; *pericline* longer than the flowers of the centre, and shorter than those of the rays; *corollæ* gold-yellow.

LXIII. 238. CINERARIA. Dodonæus. *Fleabane.*

Pericline cylindrical hemispherical; scales naked at bottom, or slightly involucrated, linear, equal, many, in a single row; edge scarious; *bracteæ* few, very short, not sphacelated; *calathides* radiated; *flowers* all fertile; of the centre hermaphrodite; of the rays ligulate; *clinanthus* slightly convex, dotted, naked; *akenium* furrowed; *pappus* hairlike, white, soft, longer than the akenium.—*Leaves* undivided.

1. *Cineraria palustris.* *Marsh fleabane.*

Stem villous; *leaves* broad, lanceolate, toothed, sinuated, slightly embracing the stem; *calathides* corymbose.

Conyza foliis laciniatis, *Raii Syn.* 174, 3; *Ger. em.* 483, 5.
Cineraria palustris, *Lin. S. P.* 1243.
Great jagged-leaved fleabane.

Ditches and bogs; perennial; June and July.

Root fibrous; *stem* 3 feet high, not branched, thick; *leaves* pale, hairy; hairs jointed; *pericline* cylindrical, little shorter than the rays; *akenium* bald.

2. *Cineraria integrifolia.* *Uncut fleabane.*

Stem simple; *lower leaves* spathulate, toothed; upper lanceolate, not cut at bottom; uppermost not in the least cut.

Jacobæa Pannonica folio non laciniato, *Raii Syn.* 178, 4.
Jacobæa angustifolia, *Ger. em.* 280, 2.
Jacobæa angustifolia Pannonica non laciniata, *Park.* 668.
Cineraria alpina γ, *Lin. S. P.* 1243.
Cineraria integrifolia β, *Lin. Syst. Veg. ed.* 14, 764.
Cineraria integrifolia, *Withering Bot. Arr.* 729.
Cambridge ragwort. Mountain fleawort.

Chalky soils; perennial; May and July.

Root fibrous; *stem* not branched; *leaves* turned back on the edges; *pericline* cylindrical hemispherical, shorter than the rays; *akenium* silky.

β. *alpina.* *Stem* 1 foot high; *leaves* large, rather naked; root-leaves broadly toothed.

Cineraria Alpina, *Allioni Pedem.* 6, 203.

3. *Cineraria serratifolia.* *Sawleafed fleabane.*

Stem stiff, rather woolly; *leaves* half embracing the stem, lanceolate, acutely serrate, slightly villous beneath; *corymbus* terminal, divaricated.

Virga aurea q. virgæ aureæ sive solidagini angustifoliæ affinis, Lingua avis Dalechampii, Joh. Bauhini, *Raii Syn.* 176, 2.
Conyza palustris serratifolia, *Ger. em.* 483, 6.
Conyza palustris, *Park.* 1232.
Senecio paludosus, *Lin. S. P.* 1220.
Marsh goden-rod. Marsh consound. Bird's tongue.

Bogs; perennial; June and July.

Root creeping; *stem* upright, simple, 6 feet high; *leaves* pointed, bald above; *akenium* hairy.

LXIV. 239. SENECIO. Pliny. *Groundsel.*

Pericline hemispherical or cylindrical; scales linear, equal, in 1 row; *bracteæ* few, small, pressed close, becoming reflexed, sphacelated at the tip; *calathides* radiated or flosculous; *flowers* all fertile; of the centre tubular, hermaphrodite; of the rays many, ligulate, female, rarely 0; ligulæ reverse ovate, yellow; *clinanthus* rather flat, naked, honeycombed; *akenia* uniform, round, streaked; *pappus* hairlike, rough.

a. Jacobeæ. *Pericline hemispherical; scales weak; rays spreading; leaves divided.*

1. *Senecio aquaticus.* *Marsh groundsel.*

Stem upright, corymbose; *leaves* lyrate, serrated; lower leaves reverse ovate, not cut; *pericline* hemispherical; *ligulæ* elliptical; *akenium* bald.

Jacobæa latifolia, *J. Bauhin Hist. Pl.* 2, 1057.
Senecio aquaticus, *Hudson Fl. Angl.* 366.

Bogs and watery places; perennial; July and August.

Stem branched; *leaves* light green; *calathides* large; *pericline* bald.

β. *flosculosus.* *Calathides* flosculous; *rays* 0.

γ. *lanatus.* *Stem* and *leaves* rather woolly.

2. *Senecio laciniatus.* *Jagged groundsel.*

Stem upright, corymbose; *leaves* lyrate, bipinnatifid, divaricated, toothed, bald; *pericline* rather cylindrical; *akenia* of the centre hirsute, of the rays rather bald.

Jacobea vulgaris, *Raii Syn.* 177, 1.
Jacobea, *Ger. em.* 280.
Jacobea vulgaris major, *Park.* 668.
Senecio Jacobea, *Lin. S. P.* 1219.
Ragwort. St. James' wort. Stagger wort. Staner wort. Ragweed. Seggrum.

Ruins and pastures; perennial; July and August.

Root fibrous; *leaves* blackish green, lobes wedgeshape, toothed; *calathides* numerous; *pericline* bald, short.—*Herb* bruised recommended in cancerous cases; dyes wool deep green, and alummed wool yellow.

β. *flosculosus.* *Calathides* flosculous; *rays* 0.

γ. *maritimus.* *Calathides* flosculous; *plant* hoary, cottony.

3. *Senecio tenuifolius.* *Thinleaved groundsel.*

Stem upright, villous; *leaves* pointed, toothed, slightly turned over; beneath pale, pubescent; *pericline* hemispherical; *akenium* hairy.

Jacobæa senecionis folio incano perennis, *Raii Syn.* 177, 2.
Senecio erucifolius, *Huds. Fl. Angl.* 366.
Senecio tenuifolius, *Jacq. Austr.* 278.

Woods and waysides on chalk; perennial;

Stem corymbose; *leaves* stem-clasping; *calathides* many; *pericline* downy; *bracteæ* weak.

β. *erucifolius.* *Herb* less cottony; *lower leaves* sessile.
Senecio erucifolius, *Curtis Fl. Lond.* 294.

4. *Senecio squalidus.* *Squalid groundsel.*

Stem upright, branched; *leaves* pinnatifid; lobes linear, toothed, distant; *pericline* hemispherical; *rays* spread, elliptical, apex not cut; *akenium* tomentose.

Senecio squalidus, *Lin. S. P.* 1218.

Walls; annual; June to October.

Stem rather bald; *leaves* deeply lobed; lobes pointed, flat; beneath glaucous; *calathides* few, corymbose; *pericline* bald; *bracteæ* weak, small.

b. *Pericline cylindrical; scales upright; rays spreading; leaves entire.*

5. *Senecio repens.* *Creeping groundsel.*

Stem upright, stiff; *leaves* sessile, lanceolate, acutely serrated, rather bald; base wedgeshape; *calathides* corymbose; *akenium* bald.

Virga aurea maxima radice repente, *Raii Syn.* 177, 2.
Senecio saracenicus, *Lin. S. P.* 1221.
Senecio repens, *Stokes Bot. Mat. Med.* 212.

Damp fields and pastures; perennial; July and August.

Root creeping; *stem* 3 feet high; *leaves* sometimes slightly downy, *pericline* woolly; *bracteæ* lanceolate.—A powerful astringent.

c. Senecciones. *Pericline cylindrical, scales upright; rays revolute, or* 0; *leaves lobed.*

6. *Senecio sylvaticus.* *Wood groundsel.*

Stem upright, stiff, corymbose; *leaves* sessile, pinnatifid, lobed, denticulated; *bracteæ* very short, pressed close.

Senecio minor latiore folio, sive montana, *Dillen in Raii Syn.* 178, 3.
Senecio sylvaticus, *Lin. S. P.* 1217.
Senecio viscosus β, *Hudson Fl. Angl.* 365.

Sandy and chalky heaths and woods; annual; July.

Stem 3 feet high, hairy; *leaves* lyrate, pinnatifid; *calathides* very small, radiated; *pericline* slightly downy; *corollæ* yellowish.

7. *Senecio lividus.* *Livid groundsel.*

Stem upright, stiff, corymbose; *leaves* stem-clasping, lanceolate, pinnatifid, toothed; *bracteæ* very short, acute; tip pale.

Senecio lividus, *Lin. S. P.* 1216.

Barren heaths; annual; September and October.

Stem a foot high; *calathides* small, radiated, gold-yellow.

8. *Senecio viscosus.* *Viscous groundsel.*

Stem much branched, spreading; *leaves* sessile, pinnatifid, toothed, viscid; *bracteæ* weak, nearly as long as the pericline.

Senecio hirsutus, viscidus, major, odoratus, *Raii Syn.* 178, 2.
Senecio fœtidus, *Park.* 671.
Erigerum tomentosum, *Ger. em.* 278, 2.
Senecio viscosus, *Lin. S. P.* 1217.
Cotton groundsell. Stinking groundsell.

Dry soils and rubbish; annual; July to October.

Stem a foot high; *calathides* large, radiated; *peduncles* solitary; *pericline* hirsute, viscid; *corollæ* gold-yellow.

9. *Senecio vulgaris.* *Common groundsel.*

Stem upright, branched; *leaves* stem-clasping, pinnatifid, sinuated, toothed; root-leaves petioled; *corymbus* close; *bracteæ* lanceolate, short, pressed close.

Senecio vulgaris, *Raii Syn.* 178, 1; *Park.* 671.
Erigerum, *Ger. em.* 278, 1.
Senecio vulgaris, *Lin. S. P.* 1216.
Senecio semperflorens, *Stokes Bot. Mat. Med.*

Cultivated places; annual; all the year.

Stem rather bald; *leaves* blunt; *pericline* bald; *calathides* flosculous.—*Juice* or a strong infusion is emetic, and vermifuge, useful to expel botts from horses; bruised leaves a good application to boils; seeds or rather calathides in fruit given to small birds.

LXV. 240. TUSSILAGO. Pliny. *Colts-foot.*

Pericline cylindrical, becomes bellied, and afterwards entirely bent back; scales many, linear, equal, in one series; *calathides* radiated; *flowers* all fertile; of the centre tubular, hermaphrodite; of the rays very numerous, female; ligulæ linear; *clinanthus* flat, becoming globose, pitted, naked, bald; *akenia* uniform, roundish; *pappus* hairlike, sessile, white, longer than the akenium.—*Herb* flowering before the leaves appear; *calathides* solitary; *peduncles* scaly; *leaves* radical, large, angular.

Tussilago vulgaris. *Common colts-foot.*

Leaves heartshape, angulate-toothed, beneath downy; *scape* smooth, bracteated.

Tussilago, *Raii Syn.* 173, 1; *Ger. em.* 811, 1; *Park.* 1220.
Tussilago Farfara, *Lin. S. P.* 1214.
Folefoot. Horse-hoof. Bullfoot.

Damp chalky places; perennial; March and April.

Root creeping; *scape* tomentose; *bracteæ* bald; *calathides* drooping, becoming upright; *leaves* petioled, upright, above bald.—*Leaves* austere, bitter, mucilaginous, useful in coughs

and consumptive cases; a strong decoction of the dried leaves of service in scrofulous cases; dried leaves the basis of cephalic snuffs; down on the under surface used as tinder.

LXVI. 241. PETASITES. Dioscorides. *Butter-bur.*

Pericline cylindrical, conical, becomes bellied, and then entirely turned back; scales many, linear, equal, in one series; *calathides* flosculous, flat at top; *flowers* all fertile; of the centre funnelshape, equal, 5-toothed, androgynous; of the rays threadlike, oblong, slightly 5-toothed, female; sometimes flowers all of one sort; *clinanthus* flat, dotted, naked; *akenium* roundish; *pappus* hairlike, rough, sessile.—*Herb* flowering before the leaves appear; *calathides* numerous; *peduncles* bracteated; *leaves* radical.

Petasites vulgaris. *Common butterbur.*

Thyrse oblong; *leaves* oblong, heartshape, unequally toothed, beneath downy, lobes approximating.

Petasites, *Raii Syn.* 179, 1; *Ger. em.* 814, 1.
Petasites vulgaris, *Park.* 419.
Tussilago Petasites, *Lin. S. P.* 1215.
Pestilent wort.

Moist meadows; perennial; March and April.

Rhizoma thick, fleshy, creeping; scales upright, woolly; *leaves* very large; *bracteæ* lanceolate; *thyrse* ovate; *flowers* uniform, all tubular, hermaphrodite; *pappus* as long as the pericline.—*Rhizoma* resinous, bitter, acrid, and strong smelling; the leaves afford shelter to small animals.

β. *elongata.* *Thyrse* oblong; *flowers* 1 to 3 hermaphrodite, rest all female, irregularly 5-toothed; *pappus* shorter than the pericline.

Petasites major, floribus pediculis longis insidentibus, *Dillen in Raii Syn.* 179, 2.
Tussilago hybrida, *Lin. S. P.* 1214.

LXVII. 242. EUPATORIUM. *Dutch-agrimony.*

Pericline oblong; scales few, oblong, equal, slightly imbricate; *calathides* flosculous; *flowers* few, all hermaphrodite; corollæ tubular, regular, 3-cut; *pollen* white; *style* long; branches linear, divaricating; *stigmata* glandular; *clinanthus* convex, naked, bald; *akenium* 4-sided, streaked; *pappus* hairlike, rough.—*Leaves* opposite; *calathides* corymbose.

Eupatorium cannabinum. *Hemp Dutch-agrimony.*
Leaves petioled, 5-parted; lobes lanceolate, serrated; middle long, largest.

Eupatorium cannabinum, *Raii Syn.* 179, 1; *Park.* 595; *Lin. S. P.* 1173.
Eupatorium cannabinum mas, *Ger. em.* 711, 2.
Herb agrimony.

Spongy watery places; perennial; July and August.
Stem 3 feet high; *branches* upright; *leaves* 3 to 5-parted, beneath pale; *calathides* many, terminal, corymbose, downy; *flowers* 5 or 6; corollæ purplish.—*Herb* emetic and purgative in small doses alterative; root diuretic.

β. *lanceolatum.* *Upper leaves* lanceolate.

Eupatorium cannabinum folio integro, seu non digitato, *Dillen in Raii Syn.* 180, 1 *.

Fam. V. 40. DIPSACEÆ. Jussieu.

Flowers aggregate, on a common receptacle girt with a many-leaved pericline; *calyx* double; outer calyx persistent, not adherent to the ovary; inner closely adherent, limb membranaceous or pappose; *corollæ* inserted on the apex of the inner calyx, 1-petaled, tubular, 4 or 5-lobed, often irregular; *stamens* 5, inserted at the base of the tube, as many as the lobes, alternating with them; *anthers* distinct; *ovary* 1, in the contracted apex of the inner calyx; *style* 1; *stigma* simple; *akenium* 1-seeded, inclosed in the calyx; *seed* pendent; perisperm fleshy, firm; corculum straight, radicle above; cotyledons oblong.—*Stem* herbaceous; *leaves* opposite.

Inner calyx not cut;
pericline-scales unequal, long ..... Dipsacus. 243.
Inner calyx not cut;
pericline-scales equal ..... Galedragon. 244.
Inner calyx 5-toothed, bristlelike;
outer 5-toothed; *clinanthus* chaffy ..... Succisa. 245.
Inner calyx 5-toothed, bristleshape;
outer dilated; *clinanthus* chaffy ..... Columbaria. 246.
Inner calyx many-toothed, bristleshape;
outer 4-toothed; *clinanthus* hirsute ..... Scabiosa. 247

I. 243. DIPSACUS. Dioscorides. *Teasel.*
Pericline-scales many, inflected; *clinanthus* long, chaffy; chaffs spinous, longer than the flowers; *calyx* double; outer angular, inner pedicelled; *corollæ* 4-cut; *stamens* 4, ex-

serted; *ovary* 1; *style* simple; *akenium* 1-seeded, enclosed in the outer calyx; *pappus* cupular, not cut.—*Herb* rough or spinose; *leaves* connate, bald; *calathides* terminal.

1. *Dipsacus sylvestris.* *Wild teasel.*

Leaves rather connate, serrate; *chaffs* straight at the tip.

Dipsacus sylvestris, seu Labrum Veneris, *Raii Syn.* 192, 2.
Dipsacus sylvestris, *Ger. em.* 1167, 2; *Park.* 984.
Dipsacus fullonum, *Lin. S. P.* 140.

Hedges and waysides; biennial; July.

Root-leaves crenate; stem-leaves serrate; *pericline-scales* unequal; *chaffs* hairy.

2. *Dipsacus fullonum.* *Fullers teasel.*

Leaves rather connate, serrate; *chaffs* hooked at the tip.

Dipsacus sativus, *Raii Syn.* 192, 1; *Ger. em.* 1167, 1; *Park.* 983.
Dipsacus fullonum β, *Lin. S. P.* 140.
Dipsacus fullonum, *Lin. Syst. Veg. ed.* 14, 143.

Fields and cultivated places; biennial; July.

Stem 3 feet high, straight; *leaves* bald.—*Heads* used to raise the nap on woollen cloth to hide the interwoven texture.

II. 244. GALEDRAGON. Xenocrates. *Shepherds-rod.*

Pericline-scales 5 to 10, equal, lanceolate; *clinanthus* ovate, convex, chaffy; chaffs dilated at bottom, pointed at top, like the scales of the pericline, longer than the flowers; *outer calyx* angular, not cut; inner peduncled, inverse-conical, fringed; *corolla* 4-cut; *stamens* 4, exserted; *style* stimple; *akenium* 1-seeded, in the outer calyx, crowned by the inner calyx.—*Herb* rough; *leaves* petioled, rough; *calathides* terminal.

Galedragon pilosus. *Hairy shepherds-rod.*

Leaves ovate, serrate, eared at bottom; *chaffs* fringed, lanceolate at the tip.

Dipsacus minor seu virga pastoris, *Raii Syn.* 192, 3; *Ger. em.* 1168, 3.
Virga pastoris, *Park.* 984.
Dipsacus pilosus, *Lin. S. P.* 141.
Small teasel.

Damp places; perennial; August.

Stem branched, upright; *calathides* roundish; *corollæ* white.

III. 245. SUCCISA. Fuchs. *Devils-bit.*

Pericline-scales few, equal, lanceolate, in one series; *clinanthus* ovate, convex, honeycombed, cells fringed; chaffs lanceolate, shorter than the flowers; *outer calyx* 4-toothed, free, contracted above; inner 5-toothed, teeth bristlelike, rough; *corolla* 4-cut, regular; *stamens* 4 or 5, exserted; *stigma* headed; *akenium* 1-seeded, free, within the inner calyx.—*Stem* herbaceous; *leaves* petioled; *calathides* terminal.

Succisa Fuchsii. *Fuchs' devils-bit.*

Stem simple, upright; *leaves* simple, lower and uppermost not cut, middle-toothed; *calathides* rather globular; *corollæ* 4-cut, regular.

Scabiosa radice succisa, flore globoso, *Raii Syn.* 191, 3.
Morsus Diaboli, *Ger. em.* 726.
Morsus Diaboli vulgaris, *Park.* 492.
Scabiosa succisa, *Lin. S. P.* 142.
Fore-bit.

Fields and meadows; perennial; August.

Root truncated; *stem* branched above; *root-leaves* blunt, upper leaves lanceolate; *corollæ* blue, violet, flesh-colour, or white.—*Herb* dyes, yellow and green; a strong decoction alterative, used in gonorrhœa.

IV. 246. COLUMBARIA. Lobell. *Field-scabious.*

Pericline-scales lanceolate, equal, in one row; *clinanthus* ovate, convex, honeycombed, cells fringed; chaffs short, lanceolate; *outer calyx* free, dilated at top; inner 5-toothed; teeth bristlelike, rough; *corolla* 4 or 5-cut; *stamens* 4 or 5, exserted; *akenium* 1-seeded, free, crowned by the inner calyx.

Columbaria minor. *Small field-scabious.*

Root-leaves ovate, crenate; stem-leaves pinnate, lobes bristlelike; *corolla* 5-cut, radiating; *akenium* 8-furrowed.

Scabiosa minor vulgaris, *Raii Syn.* 191, 2.
Scabiosa minor sive Columbaria, *Ger. em.* 719, 2.
Scabiosa minor campestris, *Park.* 484.
Scabiosa columbaria, *Lin. S. P.* 143.

Chalky and sandy pastures; perennial; June and July.

Stem brachiated above; *leaves* downy; uppermost not cut, bristlelike.

V. 247. SCABIOSA. Brunsfel. *Scabious.*

Pericline-scales lanceolate, imbricate, in many series; inner linear; *clinanthus* convex, hairy; chaffs 0; *outer calyx* free, 4-cut; inner many-cut, lobes bristlelike, unequal; *corolla* 4 or 5-cut; *stamens* 4 or 5, exserted; *akenium* 1-seeded, 4-sided, free, crowned with the inner calyx.

Scabiosa arvensis. *Field scabious.*

Stem branched, hispid; *leaves* pinnatifid-cut; *corolla* 4-cut, radiating.

Scabiosa major communior folio laciniato, *Raii Syn.* 191, 1.
Scabiosa major vulgaris, *Ger. em.* 719, 1.
Scabiosa vulgaris pratensis, *Park.* 484.
Scabiosa arvensis, *Lin. S. P.* 143.

Fields and pastures; perennial; July.

Stem 3 feet high, hairy, hairs deflexed; *corolla* light purple or white.

β. *integrifolia.* *Leaves* not cut.

γ. *æqualis.* *Inner flowers,* same length and shape as the outer.

Fam. VI. 41. VALERIANEÆ. De Candolle. *Dipsacearum pars,* Jussieu.

Calyx adherent to the ovary, 5-cut, upright or pappose; pappus revolute; *corolla* tubular, on the tip of the ovary, 5-lobed, often unequal; *stamens* 1 to 3, in the tube of the corolla; *style* 1; *stigmata* 1 to 3; *carcerule* 1 to 3-celled; cells 1-seeded, often abortive; *seeds* inverse; perisperm 0; corculum straight; radicle above. — *Stem* herbaceous; *leaves* opposite; *flowers* corymbose or panicled.

Calyx pappose; pappus featherlike; *corolla* spurless ..... VALERIANA. 248.
Calyx pappose; pappus featherlike; *corolla* spurred ..... CENTRANTHUS. 249.
Calyx toothed, persisting; *corolla* spurless ..... VALERIANELLA. 250.

I. 248. VALERIANA. Pliny. *Valerian.*

Calyx-limb at first revolute, afterwards evolved into a featherlike pappus; *corolla* tubular, not spurred, rather unequal; *stamens* 3; *carcerule* 1-seeded.

1. *Valeriana officinalis.* *Shop valerian.*

Leaves all pinnate; leaflets lanceolate, nearly equal, toothed.

Valeriana sylvestris major, *Raii Syn.* 200, 1; *Ger. em.* 1075, 2, *Park.* 122.
Valeriana officinalis, *Lin. S. P.* 45.
Great wild valerian. Capon's tail. Setwalle.

Hedges and river-sides; perennial; June.

Stem 4 feet high; *flowers* flesh-colour; *stamens* all fertile.

β. *montana.* *Stem* slender; *leaves* narrower; *root* more aromatic.

Valeriana sylvestris major montana, *Dillen in Raii Syn.* 200, 2.

Roots warm, bitterish, sub-acrid, strong-scented, anti-spasmodic in doses of ʒss. to ʒij.; excellent in habitual costiveness; cats, and especially rats, are fond of them.

2. *Valeriana Pyreniaca.* *Pyrenian valerian.*

Stem-leaves heartshape, toothed, petioled; uppermost ternate, terminal, leaflets very large.

Valeriana Pyreniaca, *Lin. S. P.* 46.

Woods; perennial; June.

Stem 2 feet high; *flowers* rose-coloured.

3. *Valeriana sylvestris.* *Wild valerian.*

Root-leaves ovate; stem-leaves lyrate, pinnate; *flowers* mostly unisexual.

Valeriana sylvestris minor, *Raii Syn.* 200, 3; *Park.* 122; the male.
Valeriana sylvestris seu palustris minor altera, *Raii Syn.* 200, 4; the female.
Valeriana minor, *Ger. em.* 1075, 3.
Valeriana dioica, *Lin. S. P.* 44.
Marsh valerian.

Damp fields and bogs; perennial; June.

Stem 1 foot high; *flowers* flesh-colour; male, style imperfect, barren; female, barren stamens at the base of the tube; sometimes both organs are perfect.

4. *Valeriana annua.* *Annual valerian.*

Leaves pinnatifid; *stamens* 2, abortive.

Valeriana annua Clusii, *Ger. em.* 1077, 8.
Valeriana Calcitrapa, *Lin. S. P.*

Walls, naturalized; annual; July and August.

II. 249. CENTRANTHUS. De Candolle. *Centranthus.*

Calyx-limb at first revolute, afterwards expanded into a featherlike pappus; *corolla* tubular, spurred at the base; limb rather unequal; *stamens* 1; *carcerule?* 1-seeded.—*Herb* smooth, entirely bald; *flowers* corymbose.

Centranthus marinus. *Sea centranthus.*

Leaves ovate, lanceolate, edge not cut.

Valeriana rubra Dodonæi, *Ger. em.* 678, 1.
Valeriana marina, *Rivini Monop.*
Valeriana rubra, *Lin. S. P.* 44.
Centranthus ruber, *De Candolle Fl. Gall.* 3327.
Red Valerian.

Old walls and chalk-pits, naturalized; perennial; June to September.

Corymbus close, much branched, terminal; *corolla* dark rose-red or white.

III. 250. VALERIANELLA. Columna. *Corn-salad.*

Calyx-limb very small, 5-toothed, not becoming pappose; *corolla* spurless; limb 5-lobed, irregular; *stamens* 3; ovary 3-celled, 2 cells mostly abortive; *carcerule* or akeniopsis 1-celled, 1-seeded.—*Stem* forked; *leaves* small, not cut; *flowers* terminal or axillary.

1. *Valerianella olitoria.* *Garden corn-salad.*

Leaves lanceolate, edge not cut; calyx very small; *fruit* 1-seeded.

Valerianella arvensis præcox humilis semine compresso, *Raii Syn.* 201, 1.
Lactuca agnina, *Ger. em.* 310, 1; *Park.* 812.
Valeriana Locusta, *Lin. S. P.* 47.
Fedia olitoria, *Gærtner Fr. et Sem.* 2, 36.
Fedia calyculata, *Stokes Bot. Mat. Med.* 98.
Lambs' Lettuce.

Cornfields; annual; April to July.

Leaves minutely fringed; *flowers* in tufts, terminal.—Young leaves eaten as salad in spring and autumn.

β. *serratifolia.* *Upper leaves* serrated at the base.

Lactuca agnina latifolia, *Ger. em.* 310, 2.
Valeriana olitoria β, *Willd. S. P.* 1, 103.

γ. *latifolia.* *Leaves* elliptical, broad.

δ. *laciniata.* *Lower leaves* jagged.

Valerianella seu lactuca agnina foliis serratis, *Raii Syn.* 201, 2.

ε. *procera.* *Herb* tall; *leaves* not cut; *fruit* round, swollen.

Valerianella vulgaris major, serotina, *Raii Syn.* 201, 3.

2. *Valerianella dentata.* *Toothed corn-salad.*
Leaves lanceolate, edge not cut; *calyx* 3-toothed, unequal, persisting; *fruit* ovate, pointed, 1-seeded.

Valerianella dentata, *Willd. S. P.* 183.
Fedia dentata, *Willd. S. P.* 182.

Fields and corn-fields; annual; April.
Stem repeatedly forked; *flowers* solitary, axillary; *calyx-teeth* 2 very short, 1 long; *fruit* ovate, gibbous.

β. *serratifolia.* *Leaves* toothed above.

Fam. VII. 42. RUBIACEÆ. Jussieu.

Calyx adherent to the ovary, 4 or 5-lobed; *corolla* on the ovary, tubular; limb 4 or 5-cut, regular; *stamens* 4 or 5, inserted into the corolla, alternating with the lobes; *ovary* 2-celled; *style* 1; *stigmata* 2, crowned by a nectary of 2 semicircular glands; *dieresile* 2-coccous, 2-seeded; cocci not dehiscent; placentarium central; *seeds* peltate; corculum straight; perisperm horny; radicle above; cotyledons leaflike.—*Stem* herbaceous; *root* reddish; *leaves* not cut, in whirls; *flowers* terminal, corymbose; *corolla* white, yellow or red.

Fruit dry, crowned; *cor.* funnelshape SHERARDIA. 251.
Fruit dry, not crowned; *cor.* funnelshape ASPERULA. 252.
Fruit dry, not crowned; *cor.* rotate, or bellshape ..... GALIUM. 253.
Fruit berrylike; *cor.* bellshape ..... RUBIA. 254.

I. 251. SHERARDIA. Dillenius. *Sherard.*

Calyx 2 lobed; lobes 2 or 3-toothed, persisting; *corolla* funnelshape, tube long, limb 4-cut; *fruit* dry, crowned with the calyx.—*Flowers* umbelled; *umbels* sessile, terminal, involucrated; *involucrum* many-leaved.

Sherardia arvensis. *Field sherard.*
Leaves 6 in a whirl; *flowers* terminal, sessile, umbelled; *involucrum* 8-leaved.

Rubeola arvensis repens cærulea, *Raii Syn.* 225, 1.
Sherardia arvensis, *Lin. S. P.* 149.
Little field madder.

Corn-fields; annual; April to September.
Herb diffuse, bald or hairy; *leaves* pointed, keel and edge rough; *corolla* purplish blue.

II. 252. ASPERULA. Dodonæus. *Woodroffe.*

Calyx very small; *corolla* funnelshape, 4-cut; tube long; *fruit* dry, corklike.—*Flowers* panicled or umbelled, terminal.

a. Asperulæ. *Flowers white; fruit hispid.*

1. *Asperula odorata.* *Sweet woodroffe.*

Leaves lanceolate, 7 to 9 in a whirl; *flowers* in bundles, peduncled; *fruit* hispid.

Asperula, *Raii Syn.* 224, 1; *Ger. em.* 1124, 1.
Asperula, sive Aspergula odorata, *Park.* 563.
Asperula odorata, *Lin. S. P.* 150.
Woodrowe. Woodrowell.

Woods and pastures; perennial; May.

Root creeping; *stem* upright, *panicle* forked in threes; *corolla* white.—While drying exhales a pleasant fragrance, like new hay.

b. Synanchicæ. *Flower reddish; fruit bald.*

2. *Asperula minor.* *Small woodroffe.*

Stem ascending, firm; *leaves* linear; upper leaves opposite, large, unequal; *corollæ* all 4-cut.

Rubeola vulgaris quadrifolia lævis, floribus purpurantibus, *Raii Syn.* 225, 1.
Synanchica Hist. Plant. Lugdunensis, *Ger. em.* 1120, 5.
Asperula repens Gesneri, seu Saxifraga altera Cæsalpini, *Park.* 453.
Asperula cynanchica, *Lin. S. P.* 151.
Squinancy wort.

Dry chalky places; perennial; June.

Root fibrous; *stem* procumbent at bottom, afterwards ascending; *leaves* or bracteæ ovate; *flowers* umbelled; *corolla* flesh-colour, scented.

III. 253. GALIUM. Dioscorides. *Cheese-rennet.*

Calyx very small; *corolla* rotate or bellshape, 4-cut; *fruit* dry, globular.

a. *Corolla yellow; fruit bald.*

1. *Galium verum.* *True cheese-rennet.*

Leaves 8 in a whirl, linear, furrowed, rough above, edge not cut; *flowering branches* short, many-flowered.

Galium luteum, *Raii Syn.* 224, 1; *Ger. em.* 1126, 1; *Park.* 564.
Galium verum, *Lin. S. P.* 155.
Ladies' bedstraw. Our lady's bedstraw. Maid's hair. Petty muguet.

Hedges and woodsides; perennial; July and August.

Root dark green, creeping; *stem* ascending; *panicle* much branched, contracted; *flowers* smell like honey.—*Root* dyes

a fine red; flowers antispasmodic, with alum dye a fine yellow, and coagulate milk when boiled in it.

2. *Galium cruciatum.* *Crossed cheese-rennet.*

Stem simple at top, hairy; *leaves* 4 in a whirl, ovate, hirsute, 3-ribbed; *peduncle* 2-leaved; *flowers* polygamous; *corolla* 4-cut.

Cruciata, *Raii Syn.* 223, 1; *Ger. em.* 1123, 1.
Cruciata vulgaris, *Park.* 566.
Valantia cruciata, *Lin. S. P.* 149.
Galium Cruciata, *Scop. Carn.* 1, 100.
Crosswort. Mugweed.

Woods and hedges; perennial; May.

Stem weak; *leaves* soft, light green, deflected when in fruit; *flowers* corymbose.

3. *Galium spurium.* *Bastard cheese-rennet.*

Stem bent back, prickly; *leaves* 6 or 8 in a whirl, edge prickly; prickles bent back; *peduncles* cymose, axillary; *fruit* upright, entirely smooth; *seed* kidneyshape.

Galium spurium, *Lin. S. P.* 154.

Fields; annual; June and July.

Corolla greenish; *ovary* quite smooth; *fruit* upright, or not bent back.

4. *Galium tricorne.* *Three-horned cheese-rennet.*

Stem trailing, simple; *leaves* 6 or 8 in a whirl, lanceolate; edge bent back, prickly; *peduncles* axillary, 3-flowered; *fruit* drooping, tubercular.

Aparine semine læviore, *Raii Syn.* 225, 2.
Aparine lævis, *Park.* 567.
Galium spurium, *Huds. Fl. Angl.* 68.
Galium tricorne, *With. Bot. Arr.* 153.
Valantia spuria, *Persoon Syn.* 129.

Fields; annual; July.

b. *Corolla white; fruit bald, not tubercled.*

5. *Galium palustre.* *Marsh cheese-rennet.*

Stem depressed, 4-sided, above branched, smooth; *leaves* 4 or 6 in a whirl, reverse ovate, blunt, unequally.

Mollugo vulgatior minor, *Raii Syn.* 224, 2; *Park.* 565.
Galium album, *Ger. em.* 1126, 2.
Galium palustre, *Lin. S. P.* 153.
White ladies' bedstraw.

Fields and pastures; perennial; July.

Leaves mostly rough on the edges; *peduncles* umbelled, 3-forked, 3-flowered.

6. *Galium Witheringii.* *Withering's cheese-rennet.*

Stem upright, simple, rough; *leaves* 5 in a whirl, lanceolate, reflexed, fringed, awned.

Galium montanum, *With. Bot. Arr.* 187; not of Linnæus.
Galium Witheringii, *Smith Fl. Brit.* 174.

Damp mountain heaths; perennial; July.

Stem 9 inches high; *panicles* terminal, forked; *flowers* before opening purplish, afterwards white; *anthers* red.

7. *Galium vulgare.* *Common cheese-rennet.*

Stem weak, angular, branched; branches very much spread; *leaves* 8 in a whirl, ovate, linear, much spread, mucronate, edge rough; *flowers* panicled; *panicles* spread.

Mollugo vulgatior, *Raii Syn.* 223, 1; *Park.* 565.
Rubia sylvestris, *Ger. em.* 1118.
Galium Mollugo, *Lin. S. P.* 155.
Wild madder. Great bastard madder.

Woods and hedges; perennial; July and August.

Stem 4 feet high, rather smooth, thick above the joints; *leaves* rather bald; *panicles* forked, much branched.

β. *scabrum.* *Stem* and *leaves* pubescent.

Galium scabrum, *With. Bot. Arr.* 190; not of Jacquin.

8. *Galium scabrum.* *Rough cheese-rennet.*

Stem tufted, swollen, diffuse, ascending, tomentose at bottom; *leaves* 6 or 8 in a whirl, linear, lanceolate, rather rough, mucronate; lowest leaves very small, withering, elliptical; *peduncles* threeforked or in threes.

Mollugo q. Galium album supinum multicaule Floræ Jenensis, *Raii Syn.* 224, 5.
Galium pusillum, *Lin. S. P.* 154.
Galium scabrum, *Jacq. Austr.*

Chalky hills; perennial; July and August.

Stems 9 inches high, rarely bald; *leaves* slightly revolute; uppermost bald; *corolla* white, not pointed; *fruit* smooth, bald.

9. *Galium erectum.* *Upright cheese-rennet.*

Stems smooth, flaccid; *leaves* 6 or 8 in a whirl; lanceolate, bald, bent back, acutely serrated, mucronated; *panicles* 3-forked.

Galium erectum, *Huds. Fl. Angl.* 68.

Damp fields and pastures; perennial; June and July.

Stem much branched, rather upright, panicled at top; *leaves* awned; *panicles* terminal and lateral, leafy, many-flowered; *corolla* white, pointed.

10. *Galium uliginosum.* *Marsh cheese-rennet.*

Stem branched, weak, angles aculeated; *leaves* 6 or 8 in a whirl, stiff, lanceolate, mucronated, bent back, serrate; serratures aculeated.

Aparine palustris minor Parisiensis, flore albo, *Dillen in Raii Syn.* 225, 3.
Galium uliginosum, *Lin. S. P.* 153.

Watery places and damp pastures; perennial; August.

Peduncles terminal, bald, 2 or 3-cut; *corolla* white, large; *fruit* small.

c. *Fruit bald, granular, or bellied.*

10. *Galium saxatile.* *Rock cheese-rennet.*

Stem much branched, prostrate, bald; *leaves* 6 in a whirl, reverse ovate, blunt, mucronate; *fruit* granulated.

Mollugo montana minor galio albo similis, *Raii Syn.* 224, 4.
Galium saxatilis, *Lin. S. P.* 154.
Galium montanum, *Huds. Fl. Ang.* 67.
Galium procumbens, *With. Bot. Arr.* 187.
Small bastard madder. Trailing goosegrass.

Heaths and mountains; perennial; July and August.

Root creeping; *stem* diffuse; *leaves* spreading; *panicle* 3-forked; *corolla* milky.

β. *lineare.* *Leaves* linear.

12. *Galium Anglicum.* *English cheese-rennet.*

Stem much branched, rough; *leaves* 6 or 8 in a whirl, deflected, lanceolate, mucronate, edge rough; *panicle* terminal; *peduncle* 2-cut; *fruit* granulated.

Aparine minima, *Raii Syn.* 225, 4.
Galium Anglicum, *Huds. Fl. Angl.* 69.
Least goose-grass.

Walls and sandy places; annual; June and July.

Root fibrous; *stem* 9 inches high; *panicles* few-flowered; *corollæ* yellowish green.

d. *Fruit rough.*

13. *Galium uncinatum.* *Hook cheese-rennet.*

Stem weak, much branched; joints villous; *leaves* 8 in a whirl, lanceolate, keeled, rough, bent back, prickly; *fruit* hairy; hairs hooked.

Aparine, *Raii Syn.* 225, 1; *Ger. em.* 1122, 1.
Aparine vulgaris, *Park.* 567.
Galium Aparine, *Lin. S. P.* 157.
Goose-grass. Gooseshare. Cleavers. Clavers.

Hedges and fields; annual; May.

Root fibrous; *stem* 3 feet high, brittle; *peduncles* axillary and terminal, simple or 2-cut; *corolla* white, small.—*Branches* used as a sieve to strain milk; a favourite food of young geese; juice antiscorbutic; seeds roasted for coffee.

14. *Galium boreale.* *Northern cheese-rennet.*

Stem upright, rough; *leaves* 4 in a whirl, lanceolate, 3-ribbed, bald; *fruit* hispid, rather scaly.

Mollugo montana erecta quadrifolia, *Raii Syn.* 224, 3.
Galium boreale, *Lin. S. P.* 156.
Crosswort madder.

Alpine rocks; perennial; July.

Root creeping; *leaves* unequal; *panicle* 3-forked; *corolla* milkwhite.

IV. 254. RUBIA. Pliny. *Madder.*

Calyx 5-toothed; *corolla* bellshaped, spread out, 4 or 5-lobed; *stamens* 4 or 5; *fruit* fleshy, bald, rather round.

1. *Rubia tinctorum.* *Dyers' madder.*

Stem rough; *leaves* annual, usually 6 in a whirl; *corolla* usually 4-cut; lobes oblong, rather callous.

Rubia tinctorum, *Raii Syn.* 223, 2; *Ger. em.* 1118, 1: *Lin. S. P.* 158.
Rubia major sativa, sive hortensis, *Park.* 274.
Red madder.

Cultivated; perennial; May to August.

Root red; *leaves* ovate, lanceolate, rough above; *calyx* scarce any.—*Root* emmenagogue; dyes a fine red colour.

2. *Rubia peregrina.* *Foreign madder.*

Stem rough; *leaves* perennial, 4 or 6 in a whirl, elliptical; above smooth, shining; *corolla* 5-cut; *lobes* mucronate, awned.

Rubia sylvestris aspera, quæ sylvestris Dioscoridis, *Raii Syn.* 223, 1.
Rubia minima, *Ger. em.* 1120, 6.
Rubia sylvestris, *Park.* 274.
Rubia peregrina, *Lin. S. P.* 158.
Rubia Anglica, *Huds. Fl. Angl. ed.* 1, 54.
Rubia tinctorum 1, *With. Bot. Arr.* 193.
Wild madder. Six-leaved madder.

Dunghills and fields; perennial; June and July.

Root creeping; *stem* branched, trailing, perennial; *leaves* dark green; *panicles* forked, terminal; *corolla* yellowish.

Fam. VIII. 43. CAPRIFOLIACEÆ. De Candolle.

Caprifolia. Jussieu.

Calyx 1-leaved, adherent to the ovary, rarely free, 4 or 5-cut, generally with 2 or 3 bracteæ at the base; *corolla* on the ovary, regular, 1-petal, 4 or 5-cut, or 4 or 5 petals, enlarged at bottom, often soldered; *stamens* as many as the lobes or petals, alternating with them; *ovary* 1, many-celled; *style* 1 or 0; *stigma* 1 to 3; *fruit* a berry or nuculanium, 1 or many-celled, often crowned; *seed* pendent; perisperm fleshy; corculum small, in the tip of the perisperm; radicle above.—*Stem* shrubby; *leaves* opposite; *flowers* axillary or terminal, corymbose.

Calyx bracteated; *corolla* 1-petaled;
stamens 4, 2 short ..... Linnæa. 255.
Cal. bracteated; *cor.* 1-pet. irreg.;
stam. 5; *style* 1; *peduncles* 2-flowered .. Xylosteon. 256.
Cal. bracteated; *cor.* 1-pet. irreg.;
stam. 5; *style* 1; *peduncle* 1-flowered Periclymenum. 257.
Cal. bracteated; *cor.* 1-pet. reg.;
stam. 5; *style* 0; *berry* 1-seeded;
flowers all fertile ..... Viburnum. 258.
Cal. bracteated; *cor.* 1-pet. reg.;
stam. 5; *style* 0; *berry* 1-seeded;
flowers outer barren ..... Opulus. 259.
Cal. bracteated; *cor.* 1-pet. reg.;
stam. 5; *style* 0; *nuculanium* 5-seeded .. Sambucus. 260.
Cal. bracteated; *corolla* 4-petaled;
nuculanium 4 or 5-seeded ..... Ilex. 263.
Bracteæ 0; *corolla* 4-petaled;
drupe naked; *nut* 2-celled ..... Cornus. 261.
Bracteæ 0; *corolla* 5-petaled;
berry crowned, 5-seeded ..... Hedera. 262.

A. Caprifoliaceæ veræ. *Calyx* bracteated; *corolla* 1-petaled; *style* simple.

I. 255. LINNÆA. Haller. *Linne.*

Calyx 5-cut, bracteated; *bracteæ* 2 or 4, persisting; *corolla* bellshape, 5-lobed; *stamens* 4, 2 shorter than the others; *stigma* globose; *berry* dry, ovate, 3-celled; cells 2-seeded.—*Stem* woody, creeping; *leaves* opposite, evergreen; *surculi* upright, above naked, 2-flowered.

Linnæa borealis. *Northern Linne.*
Leaves roundish, crenated.

Campanula serpyllifolia *Bauhin Prod.* 35.
Linnæa, 299, *Haller Hist.* 1, 131.
Linnæa borealis, *Lin. S. P.* 880.

Dry alpine woods; perennial; May and June.

Stem prostrate, long, creeping; *leaves* petioled; *flowers* drooping; *corolla* red or white, variegated, smells at night like meadow-sweet.

II. 256. XYLOSTEON. Rivinus. *Upright-honeysuckle.*

Calyx 5-toothed; *corolla* tubular, tube swollen at bottom; limb 5-cut, unequal; *stamens* 5; *filaments* long, woolly; *stigma* globose; *berry* separate, connate at bottom, 2-celled, many-seeded; or united into 1 with 2 umbilici. — *Stem* shrubby, upright; *leaves* opposite, petioled; *peduncles* axillary, 2-flowered.

Xylosteon dumetorum. *Bush upright-honeysuckle.*
Leaves not in the least cut, downy; *pedicells* perpendicular; *berries* distinct.

Periclymenum rectum Germanicum, *Ger. em.* 1294, 2.
Periclymenum rectum flore rubro, *Park.* 1462.
Xylosteum, *Rivinus Monop. irr.* 120.
Lonicera Xylosteum, *Lin. S. P.* 248.
Lonicera pubescens, *Stokes Bot. Mat. Med.* 372.

Dry bushy places; shrubby; May.

Stem 8 feet high; *leaves* ovate, soft; *corolla* yellow; *upper leaf* 4-cut; lower strapshape, not cut; *bracteæ* linear, spreading. — *Stem* bored for tobacco-pipes; wood hard used for teeth of rakes.

III. 257. PERICLYMENUM. Dioscorides. *Woodbine.*

Calyx 5-toothed; *bracteæ* 2; *corolla* tubular, 5-cut, irregular, 2-lipped; *stamens* 5, as long as the corolla; *stigma* globose; *berries* distinct, 3-celled, many-seeded. — *Stem* ligneous, twining; *leaves* deciduous, often connate; *flowers* sessile, terminal and capitate or axillary, whirled, 6-flowered.

1. *Periclymenum perfoliatum.* *Thorowleaved woodbine.*
Upper leaves united at bottom, perfoliated; *flowers* in whirls; *calyx* scarcely cut.

Periclymenum perfoliatum, *Ger. em.* 891, 2.
Periclymenum perfoliatum sive Italicum, *Park.* 1460.
Lonicera Caprifolium, *Lin. S. P.* 247.
Italian honeysuckle.

Woods; shrubby; May and June.

Leaves ovate, blunt, not in the least cut, bald; *corolla* yellowish red at the bottom, odoriferous.

2. *Periclymenum vulgare.* *Common woodbine.*

Leaves distinct; *flowers* in heads, imbricate; *calyx* five-toothed.

Caprifolium Germanicum, *Raii Syn.* 458, 1.
Periclymenum, *Ger. em.* 891, 1.
Periclymenum seu Caprifolium vulgare, *Park.* 1460.
Lonicera Periclymenum, *Lin. S. P.* 247.
Common honeysuckle. Caprifoly.

Woods and hedges; shrubby; May to July.

Leaves ovate, not in the least cut, slightly downy; *corolla* red on the outside, yellowish inside; upper lip 3-cut, lower 2-cut.

β. *quercifolium.* *Leaves* sinuated.

Caprifolium non perfoliatum, foliis sinuosis, *Raii Syn.* 458, 2.

B. *Calyx* bracteated; *corolla* 1-petaled; *style* 0; *stigmata* 3.

IV. 258. VIBURNUM. Varro. *Wayfaring tree.*

Calyx small, 5-cut; *corolla* bellshape, 5-lobed; *stamens* 5; *style* 0; *stigmata* blunt; *berry* naked, 1-seeded; *seed* compressed.—*Leaves* opposite, clothlike; *petioles* naked; *flowers* umbelled, corymbus terminal, all hermaphrodite; *berries* black.

Viburnum farinosum. *Mealy wayfaring-tree.*

Leaves heartshape, serrate, veined, beneath clothlike.

Viburnum, *Raii Syn.* 460, 1; *Park.* 1448.
Lantana sive Viburnum, *Ger. em.* 1490.
Viburnum Lantana, *Lin. S. P.* 384.
Viburnum farinosum, *Stokes Bot. Mat. Med.* 168.
Pliant mealy-tree. Cotton-tree.

Woods and hedges, in chalky soils; tree; May.

Leaves downy; down radiated.—*Bark* affords birdlime; *berries* astringent.

V. 259. OPULUS. Ruellius. *Gueldres-rose.*

Calyx small, 5-cut; *corolla* bellshape, 5-lobed; *stamens* 5; *berry* naked, 1-seeded; *seed* compressed.—*Leaves* opposite; petioles leafy at bottom, glandular at the tip; *flowers* umbelled; corymbus terminal; outer flowers radiating, irregular, barren; inner hermaphrodite; *berries* red.

Opulus palustris. *Marsh Gueldres-rose.*

Leaves bald, 3-lobed, sharply-toothed; petioles glandular.

Opulus, *Raii Syn.* 460, 1.
Sambucus aquatilis, sive palustris, *Ger. em.* 1424, 1.
Sambucus aquatica, sive palustris, *Park.* 209.
Viburnus Opulus, *Lin. S. P.* 384.
Water elder. Whitten-tree. Oppel-tree. Dwarf plane-tree.

Damp woods and hedges; tree; June.

VI. 260. SAMBUCUS. Pliny. *Elder.*

Calyx small, 5-cut; *corolla* rotate, 5-lobed; *stamens* 5; *nuculanium* 1-celled; *pyrenæ* 3, 1-seeded.—*Stem* herbaceous or arborescent; *leaves* opposite, pinnate with an odd one, or bipinnate, rarely 2-glandular; *flowers* umbellate, corymbus terminal; *berry* black.

a. Ebulus. *Stem herbaceous; stipules leaflike; stamens upright; flowers pedicelled; corolla bellshape rotate.*

1. *Sambucus humilis.* *Dwarf elder.*

Stem herbaceous; *leaves* pinnate; leaflets lanceolate; *stipules* petioled, leaflike, ovate; *cymes* 3 or 5-parted.

Sambucus humilis seu Ebulus, *Raii Syn.* 461, 4.
Ebulus sive Sambucus humilis, *Ger. em.* 1426; *Park.* 209.
Sambucus Ebulus, *Lin. S. P.* 385.
Sambucus herbacea, *Stokes Bot. Mat. Med.* 170.
Danewort. Wallwort.

Ruins and waysides; perennial; July.

Root creeping; *stem* simple, upright; *leaves* dark green, serrated, leaflets equal at the base, glandular.—*Root* violently cathartic in doses of ʒjs.; leaves drive away mice, and are supposed to prevent disease in swine if used as litter; berries dye blue.

b. *Stem arborescent; stipules* 0; *stamens divaricating; flowers nearly sessile; corolla rotate.*

2. *Sambucus niger.* *Black elder.*

Stem arborescent; *leaves* pinnate; leaflets ovate, serrated; *cymes* 5 or 7-parted.

Sambucus, *Raii Syn.* 461, 1; *Ger. em.* 1422.
Sambucus vulgaris, *Park.* 207.
Sambucus nigra, *Lin. S. P.* 385.
Common elder.

Woods and hedges tree; June.

Stem arborescent, much branchy; *leaflets* mostly 5, bald; *berry* globose, blood-purple.—*Plant* narcotic, wood hard, tough, yellow; inner bark purgative, acrid, and in small doses diuretic; leaves purgative, drive away insects; flowers in decoction diaphoretic, and expectorant, used to flavour vinegar, deleterious to turkeys; berries poisonous to all poultry, laxative and diaphoretic, used to colour wines.

β. *viridis.* *Berries* green or white.

Sambucus acinis albis, *Raii Syn.* 461, 2.
Sambucus fructu albo, *Ger. em.* 1422, 2; *Park.* 208.
White-berried elder.

γ. *laciniata.* *Leaves* jagged; *berries* greenish white.

Sambucus laciniato folio, *Raii Syn.* 461, 3; *Park.* 208.
Sambucus laciniatis foliis, *Ger. em.* 1422, 3.
Parsley-leaved elder.

C. *Calyx* not bracteated; *corolla* many-petaled; *style* 1.

VII. 261. CORNUS. Pliny. *Cornel.*

Calyx 4-toothed; *corolla* 4-petaled; *stamens* 4; *drupe* not crowned; nut 2-celled, 2-seeded.

1. *Cornus sanguinea.* *Bloody cornel.*

Stem arborescent; branches upright; *leaves* ovate, both sides green; *cyme* naked, depressed.

Cornus fœmina, *Raii Syn.* 460, 1; *Ger. em.* 1467; *Park.* 1521.
Cornus sanguinea, *Lin. S. P.* 171.
Wild cornel-tree. Dogberry. Hounds-tree. Hounds-berry. Prick-timber. Gatter-tree.

Woods and hedges; shrubby; July.

Branches opposite, dark purple; *leaves* not in the least cut; *flowers* white, odoriferous; *drupe* black.—*Wood* hard, smooth, used for skewers; leaves change to blood-red in autumn; drupe bitter, styptic, dyes purple, long in ripening, when ripe yield a viscid oil.

2. *Cornus herbacea.* *Herbaceous cornel.*

Stem herbaceous; branches binate; *leaves* opposite, sessile, distinctly ribbed; *umbells* axillary, peduncles involucrated.

Chamæpericlymenum, *Raii Syn.* 261, 1; *Ger. em.* 1296, 5; *Park.* 1461.
Cornus Suecica, *Lin. S. P.* 171.
Cornus herbacea, *Hudson Fl. Angl.* 71.
Cornus biramis, *Stokes Bot. Mat. Med.* 221.
Dwarf cornel. Dwarf honeysuckle.

Alpine fields; perennial; June and July.

Root creeping; *stem* 4-angular, one foot high, tip 2-cut; *umbell* simple, in the fork; *involucrum* 4-leaved, persisting; *flowers* purplish; *drupe* sweetish.

VIII. 262. HEDERA. Pliny. *Ivy.*

Calyx 5-toothed; *corolla* 5-petaled; *stamens* 5, longer than the petals; *anthers* 2-forked at bottom; *style* short; *stigma* simple; *ovary* 5-celled, cells 1-seeded; *berry* only 1-celled, crowned with the calyx.—*Stem* shrubby, sarmentose, climbing on walls and trees; *leaves* alternate, evergreen; *petioles* dilated at bottom; *flowers* umbelled, terminal.

Hedera communis. *Common ivy.*

Leaves 5-angular, 5-lobed; uppermost ovate, swelled, upright.

Hedera communis major and minor, *Raii Syn.* 459, 1.
Hedera corymbosa, *Ger. em.* 856, 1.
Hedera arborea sive scandens et corymbosa communis, *Park.* 678.
Hedera Helix, *Lin. S. P.* 292.
Climbing ivy. Berrybearing ivy.

Walls and trees; shrubby; October.

Leaves petioled, edge not in the least cut, dark green; *flowers* green.—*Root* used to whet knives; *leaves* nauseous, used in the atrophy of children, and as a cover to issues instead of a plaster; berries slightly acid, emetic and purgative; gum strong smelling, attractive of fish.

β. *sterilis. Herb* trailing on the ground; *leaves* 3-angular; *flowers* 0.

Hedera Helix, *Ger. em.* 857, 2; *Park.* 678.
Barren ivy. Creeping ivy. Ground ivy.

D. AQUIFOLIACEÆ. *Ovary* free.

IX. 263. ILEX. Pliny. *Holly.*

Calyx very small, 4-toothed; *corolla* 4-petaled, soldered at the base; *stamens* 4; *stigmata* 4; *nuculanium* 1-celled; *pyrenæ* 4, streaked, 1-seeded.—*Stem* arborescent or shrubby; *leaves* alternate, evergreen, spinose; *peduncles* axillary, many, 2-bracteated.

Ilex vulgaris. *Common holly.*

Leaves ovate, pointed, spinous, shining, waved; *flowers* nearly umbelled.

Agrifolium, *Raii Syn.* 466, 1; *Ger. em.* 1338.
Agrifolium sive aquifolium, *Park.* 1486.
Ilex Aquifolium, *Lin. S. P.* 181.
Aquifolium vulgare, *Gærtner Fr. et Sem.* 2, 72.
Hulver. Holme.

Woods and hedges; tree; May.

Lower leaves thorny, upper unarmed; *nuculania* scarlet, crowned with the persisting stigmata.—*Wood* hard, smooth; bark yields birdlime; berries a great resource for small birds in winter, and are used in colic.

Fam. IX. 44. LORANTHIDEÆ. *Loranthecæ*, Richard and Jussieu.

Calyx 1-leaved, adherent to the ovary, mostly bracteated; *bracteæ* 2 or 3; *corolla* on the ovary, regular; petal 1, 4 or 5-cut; or 4 or 5, soldered at the base; *stamens* 4 or 5; opposite to the lobes or petals; *ovary* many-celled; *style* 1; *stigma* 1; *fruit* fleshy or dry; *ovule* 1, attached to the apex; perisperm fleshy; corculum cylindrical, axile; cotyledons 2; radicle above, roundish, slightly elevated from the perisperm.—*Plant* parasitic; *stem* woody; *leaves* opposite; *stipules* 0; *flowers* axillary or terminal, solitary or spiked.

I. 264. VISCUM. Pliny. *Misseltoe.*

Monoicous or *dioicous.*—*Calyx* scaly, scales prominent, not cut; *corolla* 4-petaled, petals short, soldered at bottom; *anthers* 4, sessile, inserted in the middle of the petals; *ovary* connate to the edge of the calyx; *stigma* 1; *berry* globose, 1-seeded.—*Plant* parasitic, shrubby or undershrubby; *leaves* opposite, thick; *flowers* axillary, sessile.

Viscum album. *White misseltoe.*

Leaves lanceolate, blunt; *flower-heads* axillary.

Viscum, *Raii Syn.* 464, 1; *Ger. em.* 1350.
Viscum vulgare, *Park.* 1392.
Viscum album, *Lin. S. Pr* 1451.
Missel.

On trees; shrubby; May.

Stem much branched, jointed; *leaves* pale green, ligulate, coriaceous, many-ribbed; *head* few-flowered; *flowers* yellowish green; *receptacle* fleshy; *berry* white.—Leaves used against epilepsy and other spasmodic diseases, also against the rot in sheep; bark and berries yield birdlime: propagated by rubbing the berries on the bark of trees so as to make them adhere. The viscum quercûs of the ancient druids, to which many magical properties were attributed, is supposed by De Candolle not to be this plant, but the loranthus, because he has never found the viscum growing upon oak, although common in the countries formerly de-

voted to the druidical religion; and the loranthus grows commonly on the indigenous oaks of Italy, and is there taken for the misseltoe; so that it is probable the loranthus formerly grew on the oaks in the druidical countries, but was extirpated by them, from the great use made of it in their religious rites.

II. 265. ADOXA. Linnæus. *Moscatell.*

Calyx 4 or 5-cut; bracteæ 2 or 4, scalelike; *petals* 0; *stamens* 8 or 10, alternating with the lobes of the calyx; *anthers* roundish; *styles* 4 or 5; *berry* globular, umbilicated, 4 or 5-celled; cells 1-seeded.—*Stem* herbaceous; *root-leaves* biternate; scape-leaves 2, opposite, in the middle; *head* single, 5-flowered, cubical; top-flower 5-cut, decandrous, pentagynous; side-flowers 4-cut, octandrous, tetragynous.

Adoxa tuberosa. *Tuberous moscatell.*

Moschatellina foliis fumariæ bulbosæ, *Raii Syn.* 261, 1.
Radix cava viridi flore, *Ger. em.* 1091, 10.
Ranunculus nemorosus, Moschatella dictus, *Park.* 226.
Alabastritis, sive dentaria minima, *Park.* 621.
Adoxa moschatellina, *Lin. S. P.* 327.
Small bunnikens holewort.

Shady places; perennial; April and May.

Root creeping, scaly; *flowers* greenish.—An anomalous plant scarcely referable to this or any other family.

Fam. X. 45. UMBELLIFERÆ. Jussieu. *Umbellatæ*, Linnæus.

Flowers hermaphrodite, unisexual, or neuter, rarely diclinous; *calyx* adhering to the ovary, not cut, or 5-cut; *corolla* 5-petaled; petals often unequal, radiating, not cut or cut, inflected into a lacinule, falling off; *stamens* 5, simple, inserted between the calyx and the stylopodium; *anthers* ovate, nearly round, 2-celled; *styles* 2, persistent, sitting on a stylopodium; *stylopodium* dilated at bottom, covering the ovary; *fruit* 2-partible, ovules pendulous; *spermapodium* axile, usually 2-parted, thickened at bottom; *akenia* 2, vittated, or not vittated and then inodorous and insipid; *vittæ* resinbearing, aromatic, enclosed in the epicarp under the vallecules and commissures, or in the membranaceous endocarp; *seed* inverted; perisperm horny; corculum small, straight; radicle above; cotyledons linear,

ovate, nearly equal.—*Root* fusiform; *stem* mostly herbaceous; *leaves* alternate, cut, or compound, rarely undivided; petiole sheathing; *flowers* umbelled; umbells terminal or axillary, often divided into umbellules, naked or involucrated or involucellated, or both.

A. *Flowers regularly umbelled, white or reddish.*

A. 1. *Fruit ribbed, ribs naked.*

a. *Akenium roundish, vittated; vittæ epicarpic, dorsal and commissural.*

a. 1. *Involucrum and involucella many-leaved.*

Calyx 5-toothed; *petals* reverse ovate, nicked; *akenium* oblong, 5-ribbed; *stylopodium* scaly ..... DREPANOPHYLLUM. 276.

Calyx 5-toothed; *petals* uncut, involute; *akenium* oblong, 5-ribbed; ribs winged LIGUSTICUM. 292.

Calyx 5-toothed; *petals* uncut, involute; *akenium* oblong, 5-ribbed ..... PSEUDOSPERMUM. 293.

Calix 5-toothed; *petals* uncut, broad-based; *akenium* ovate, oblong, spongy ..... CRITHMUM. 283.

a. 2. *Involucrum* 0 *or few-leaved, deciduous; involucella many-leaved, regular.*

Petals heartshape, equal; *calyx* very small; *aken.* oblong, 5-ribbed; *involucella* ovate ..... SIUM. 277.

Pet. heartshape, broad, equal; *cal.* very small; *aken.* oblong, 5-ribbed; *involucella* linear .. BUNIUM. 288.

Pet. heartshape, reverse ovate, equal; *cal.* 5-toothed; *aken.* ovate, semiglobose, 5-ribbed ..... CICUTA. 279.

Pet. heartshape, nearly equal; lacinule short; *aken.* ovate, 5-ribbed, crowned; *rays* fertile ..... PHELLANDRIUM. 280.

Pet. heartshape, radiating; lacinule long; *aken.* truncate, 5-ribbed, crowned; *rays* barren ..... ŒNANTHE. 281.

Pet. heartshape, radiating; lacinule short; *aken.* linear, awlshape, 5-ribbed; *rays* barren ..... CHÆROPHYLLUM. 275.

Pet. lanceolate; *calyx* very small; *aken.* orbicular, laterally compressed; *umbells* simple ..... HYDROCOTYLE. 278.

a. 3. *Involucrum* 0, *or few-leaved, deciduous; involucella halved.*

Involucella many-leaved, erect; *petals* nicked;
akenium elliptical, 5-ribbed ..... MEUM. 291.
Involucella 3-leaved, hanging; *pet.* heartshape;
akenium ovate, 5-jugated ..... ÆTHUSA. 286.

a. 4. *Involucrum and Involucella* 0.

Pet. reverse ovate, bald; lacinule crenulate;
akenium ovate, 5-ribbed ..... PIMPINELLA. 284.
Petals reverse heartshape;
akenium linear, oblong, 5-ribbed ..... CARUM. 290.
Petals ovate, lanceolate; lacinule acute;
aken. ovate, 5-jugated; *flow.* unisexual ..... TRINIA. 285.

b. *Fruit globular, vittated; vittæ epicarpic, commissural, not dorsal.*

Involucrum 0; *involucella* 3-leaved, halved;
pet. 2-lobed, radiating; *aken.* hemispherical,
4-ribbed ..... CORIANDRUM. 301.

c. *Fruit roundish, not vittated, inodorous, insipid.*

Involucel. halved, 3-leaved; *pet.* rev. heartshape;
aken. ovate, 5-ribbed; ribs crenulate ..... CONIUM. 287.
Involucrum and *involucel.* 0; *pet.* rev. ovate,
equal; *aken.* oblong, 5-ribbed ..... ÆGOPODIUM. 289.

d. *Fruit compressed; vittæ endocarpic.*

Involucrum and *involucella* many-leaved;
cal. 5-toothed; *aken.* ovate, edged; *pet.* rev.
heartshape, spreading ..... THYSSELINUM. 295.
Involucella many-leaved; *cal.* 0; *aken.*
winged, 3-ribbed; *umbell* hemispherical .. ANGELICA. 297.
Involucella few-leaved; *cal.* 0;
aken. margined, 3-ribbed; *umbell* flat IMPERATORIA. 296.
Involucella halved; *cal.* 5-lobed;
aken. fungous; *pet.* ovate lanceolate,
inflected ..... ARCHANGELICA. 298.

A. 2. *Fruit ribbed; ribs armed.*

a. *Ribs hairy; vittæ epicarpic, dorsal and commissural.*

Involucrum and *involucella* many-leaved;
calyx very small; *pet.* heartshape, hirsute;
akenium reverse ovate, 5-ribbed ..... LIBANOTIS. 294.

b. *Ribs bristled, glochidated; vittæ epicarpic, dorsal and commissural.*

Akenium ovate, 5-ribbed; prickles united by a membrane at bottom; *invol.* pinnatifid DAUCUS. 265.
Aken. ovate, 3-ribbed, prickly; *involucrum* not cut; *pet.* rev. heartshape, strigose ..... TORILIS. 268.
Aken. ovate, 5-ribbed; prickles in 2 rows; *involucella* many-leaved ..... CAUCALIS. 269.
Aken. oblong, 7-jugate; prickles in 1 or 2 rows, alternately; *involucrum* and *involucella* many-leaved ..... TURGENIA. 270.

c. *Ribs armed, beaked; vittæ* 0; *inodorous, insipid.*

Involucella 5-leaved, not cut; *petals* equal; *akenium* beaked, 5 jugate; beak short .... MYRRHIS. 274.
Involucella many-leaved, pinnatifid; *pet.* equal; *akenium* beaked; beak long ..... SCANDIX. 273.
Involucella 3 to 5-leaved, not cut; *pet.* equal; *aken.* awlshape, bald, beaked; beak short; *spermapodophore* naked ..... CEREFOLIUM. 271.
Involucella 3 to 5-leaved, not cut; *pet.* equal; *aken.* awlshape, thorny, beaked; beak short; *spermapodophore* fringed ..... ANTHRISCUS. 272.

A. 3. *Fruit not ribbed.*

a. *Fruit compressed, armed; vittæ epicarpic, dorsal, and commissural.*

Involucrum and *involucella* few-leaved; *pet.* radiating; *aken.* 4-vittated; *dorsal vittæ* clavate ..... SPONDYLIUM. 299.
Involucrum and *involucella* many-leaved; *pet.* radiating; *aken.* margined, thickened; *dorsal vittæ* 4, threadshape ..... TORDYLIUM. 300.

b. *Fruit roundish, armed; vittæ endocarpic.*

Involucrum and *involucella* many-leaved; *aken.* ovate, chaffy; *cal.* 5-toothed; *pet.* rev. heartshape ..... SANICULA. 267.

B. *Flowers regularly umbelled, yellow or greenish.*

a. *Fruit ribbed; ribs naked; vittæ epicarpic, dorsal, and commissural.*

Invol. 0; *akenium* oblong, 3-angular; *albumen* involute ..... SMYRNIUM. 308.

Invol. 0; *akenium* ovate, 5-ribbed; *petals* involute ..... FŒNICULUM. 307.

Invol. 0; *akenium* roundish, 3-ribbed; *petals* roundish; lacinule blunt ..... APIUM. 306.

Involucella many-leaved; *petals* ovate; lacinule pointed; *aken.* ovate, 5-ribbed PETROSELINUM. 305.

Involucella many-leaved; *pet.* incurved; *akenium* ovate, compressed, margined; *calyx* 5-lobed ..... PEUCEDANUM. 302.

Involucella many-leaved; *pet.* incurved; *aken.* ovate, compressed; *calyx* 0 ..... SILAUS. 304.

b. *Fruit ribbed, inodorous, insipid; vittæ* 0.

Involucellum 5-leaved; *akenium* ovate, oblong, 5-ribbed; ribs 2-keeled ..... BUPLEURUM. 309.

c. *Fruit ribless, compressed; vittæ epicarpic, dorsal and commissural.*

Involucrum and *involucella* 0; *pet.* involute; *dorsal vittæ* 4, equal, acute ..... PASTINACA. 303.

d. *Fruit ribless, venulose, inodorous, insipid; vittæ* 0.

Involucrum and *involucella* 5-leaved; *akenium* ovate; *calyx* toothed ..... AGOSTANA. 310.

C. *Flowers capitate, sessile, white; akenium chaffy; calyx 5-toothed.*

Involucrum 3 to 5-leaved; *involucella* 1-leaf, topshape; *aken.* immersed in the involucella; *flowers* unisexual ..... ECHINOPHORA. 282.

Flowers intermixed with chaffs; *aken.* ovate, hispid, chaffy ..... ERYNGIUM. 311.

I. 266. DAUCUS. Dioscorides. *Carrot.*

Involucrum and *involucella* many-leaved; leaflets pinnatifid; *calyx* 5-toothed, small; *petals* nicked, unequally 2-lobed; lacinule oblique, flexuous, keeled; *fruit* ovate; *akenium* ovate; latuscule 5-ribbed; ribs bristly, bristles in 1 row; vallecules 4, prickly; prickles in a single row, connected at bottom by a membrane containing vittæ; *spermapodium* simple, bristlelike.—*Umbells* many-rayed, flat when flowering.

1. *Daucus vulgaris.* *Common carrot.*

Stem and *leaves* hispid; petioles ribbed underneath; lobes of the leaflets slender, linear, pointed; *umbells* when in fruit concave; *prickles* of the akenia bald, hooked at the tip.

Daucus vulgaris, *Raii Syn.* 218, 2.
Pastinaca sylvestris tenuifolia, *Ger. em.* 1028, 1; *Park.* 902.
Staphylinus, *Rivinus Pent.* 28.
Daucus Carota, *Lin. S. P.* 348.
Cancalis Carota, *Hudson Fl. Angl.* 114.
Wild carrot. Bird's nest. Bee's nest.

Edges of fields; annual; June and July.

Root fusiform; *leaves* tripinnate; *flowers* white; of the centre blood-colour.—*Seeds* diuretic, carminative, and their infusion useful in gravelly complaints.

β. *polygamus.* *Marginal flowers* of the umbels mostly male; *akenium* yellow; prickles very large.

γ. *maritimus.* *Leaves* dark glossy green, hairy; segments deeply cloven; *flowers* all white.

Daucus maritimus, *Lamarck Encyc. Meth.* 1, 634.

δ. *flavus.* *Roots* large, deep yellow, or white.

Daucus sativus radice lutea et alba, *Raii Syn.* 218, 1.
Pastinaca sativa tenuifolia, *Ger. em.*
Pastinaca tenuifolia sativa lutea, *Park.* 902.
Yellow carrots.

Cultivated; biennial; June and July.

ε. *atro-rubens.* *Roots* large, blackish red.

Daucus sativus radice atrorubente, *Raii Syn.* 218, 1.
Pastinaca sativa atrorubens, *Ger. em.* 1027.
Pastinaca sativa altera atrorubens, *Park.* 901.
Red carrots. Black carrots.

Cultivated in deep rich soils; biennial; June and July.

Roots of both these cultivated varieties saccharine, nutritive, to man and beast; but when horses are kept upon them for some time they induce hæmaturia; in poultices they abate the pain and fœtor of foul and cancerous ulcers.

2. *Daucus? maritimus.* *Sea-carrot.*

Stem woolly, scored; *leaflets* dilated, fleshy, rounded, hirsute; *umbell* when in fruit convex.

Daucus maritimus, *Withering Bot. Arr.* 290; not of Lamarck.
Daucus Carota γ, *Smith Fl. Brit.* 300.

Rocks on the sea-coasts; annual; July and August.

Stem 2 feet high; *leaves* woolly, leaflets cloven, broad, round at the end, curled; *involucrum* pinnatifid; involucella cut or not cut; *akenium* with 4 large deeply toothed ridges, and 3 small intervening ones; teeth flat.

II. 267. SANICULA. Brunsfel. *Sanicle,*

Involucrum pinnatifid; involucella many-leaved; *flowers* glomerate; *calyx* 5-toothed; *petals* equal, reverse heart-shape; lacinule lanceolate, channelled, toothed at the tip; *fruit* round, crowned with the calyx and long reflexed style; *akenium* ovate, covered with hooked spines; *spermapodium* 0; *vittæ* many, epicarpic.

Sanicula Europea. *European sanicle.*

Stem leafless; *leaves* 5-lobed; lobes 3-cut, toothed; *flowers* all nearly sessile.

Sanicula sive Diapensia, *Raii Syn.* 221, 1; *Ger. em.* 948, 1.
Sanicula vulgaris sive Diapensia, *Park.* 532.
Sanicula europæa, *Lin. S. P.* 339.
Astrantia Diapensia, *Scop. Carn.* 2, 304.
Caucalis Sanicula, *Crantz* 228.

Woods and copses; perennial; May.

Root fleshy; *stem* 18 in. high; *leaves* petioled, bald; *umbell-rays* unequal, often branched; *flowers* whitish, uniform, hermaphrodite and female fertile, male barren; female flowers often apetalous.

III. 268. TORILIS. Adanson. *Hedge-parsley.*

Involucrum 1 to 5-leaved; *involucella* 5 to 8-leaved; leaves adpressed; *calyx* 5-toothed, persisting, equal; *petals* reverse-heartshape, 2-lobed, strigose; lacinule short, channelled, lanceolate; *fruit* ovate; *akenium* ovate, slender above; latuscule 3-ribbed; vallecules 4, 4-vittated; ribs and vallecules covered with bristles and prickles; prickles rough, distinct; *spermapodium* threadshape, bristlelike, slightly 2-cut; *spermapodophore* fringed, hairs adpressed.

a. *Umbells terminal; akenium equally muriated.*

1. *Torilis rubella.* *Red hedge-parsley.*

Involucrum and *involucella* 5-leaved; *prickles* of the akenium incurved, rough, apiculated.

Caucalis minor flosculis rubentibus, *Raii Syn.* 219, 4; *Ger. em.* 1022, 5.
Caucaulis minor flore rubente, *Park.* 921.
Tordylium Anthriscus, *Lin. S. P.* 346.
Caucalis Anthriscus, *Hudson Fl. Angl.* 114.
Torilis Anthriscus, *Sprengler Umbel.* 24.
Torilis rubella, *Mœnch Meth.* 143.

Hedges; annual; July.

Stem upright, 2 feet high, hairy, hairs deflexed; *leaves* bipinnatifid; *umbells* terminal, many-cut, crowded; *fruit* violet at the tip.

2. *Torilis infesta.* *Troublesome hedge-parsley.*

Involucrum 1-leaved, or 0; *prickles* of the fruit turned to the base, rough, glochidated; *terminal leaflet* largest.

Caucalis segetum minor, anthrisco hispido similis, *Raii Syn.* 220, 5.
Scandix infesta, *Lin. Syst. Nat. ed.* 12, 732.
Caucalis arvensis, *Hudson Fl. Angl.* 113.
Caucalis infesta, *Curtis Fl. Lond.*
Caucaulis Helvetica, *Jacq. Hort. Vind.* 3, 16.
Spreading corn-parley. Corn hensfoot.

Fields and waysides; annual; July.

Stem 18 inches high, knotty, much branched; branches divaricating; *umbells* terminal; rays many, crowded.

b. *Umbells lateral, opposite to the leaves; seeds unequally muricated.*

3. *Torilis nodosa.* *Knotted hedge-parsley.*

Stem prostrate; *umbells* and *fruit* nearly sessile, lateral; *prickles* of the outside fruits hooked, glochidated; of the central fruits warty, scaly.

Caucalis nodosa echinato semine, *Raii Syn.* 220, 6; *Ger. em.* 1022, 6; *Park.* 921.
Tordylium nodosum, *Lin. S. P.* 346.
Caucalis nodosa, *Huds. Fl. Angl.* 114.
Torilis nodosa, *Gærtner Fr. et Sem.* 1, 82.
Caucalis nodiflora, *De Candolle Fl. Gall.* 3512.
Knotted parsley.

Edges of fields on chalk or sand; annual; May and June.

Stem branched, rough; *leaves* glaucous, bipinnate; *leaflets* cut.

IV. 269. CAUCALIS. Hippocrates. *Hens-foot.*

Involucrum 1-leaved; *involucella* 3 to 8-leaved; leaves lanceolate, spread; *calyx* 5-toothed; 2 larger, lanceolate, exserted; *petals* 2-lobed; lacinule short, heartshape, lanceolate; *fruit* oval; *akenium* oblong, ovate; latuscule three-ribbed; vallecules 4-vittated, jugate, prickly; prickles in 2 rows, jugate or connate; *spermapodium* bristly, compressed, cut at the tip; *spermapodophore* scrobiculate.

Caucalis daucoides. *Carrot hens-foot.*

Involucrum 3 to 5-leaved; *akenium-prickles* ovate, hooked, bald.

Caucalis tenuifolia, flosculis subrubentibus, *Raii Syn.* 219, 1.
Caucalis albis floribus, *Ger. em.* 1021, 1.
Caucalis tenuifolia purpurea, *Park.* 920.
Conium Royeni, *Lin. S. P.* 350.
Caucalis leptophylla, *Hudson Fl. Angl.* 199; not of Linnæus.
Caucalis daucoides, *Lin. Syst. Nat. ed.* 12, 201.
Fine-leaved bur-parsley.

Chalky fields; annual; June.

Stem much branched; branches flexuous, divaricated; *leaves* triplicato-pinnate; ribs prickly beneath; *umbells* opposite to the leaves, 3-rayed, naked; umbellules many-flowered, only 3 or 4-fruited; *calyx-teeth* lanceolate, pointed, bald; *bristles* on the ribs of the akenium simple.

V. 270. TURGENIA. G. F. Hoffman. *Bur-parsley.*

Involucrum and *involucella* 3 to 5-leaved; leaves ovate, equal, not cut; *calyx* 5-toothed, teeth short, fringed; *petals* obliquely bent, radiating, 2-lobed; lacinule lanceolate, keeled; *fruit* oblong, gibbous; *akenium* oblong, gibbous, 7-jugate; jugæ prickly; prickles alternately 1 and 2-rowed; commissure contracted, furrowed in the middle, toothed on the edge near the bottom, crowned; *spermapodium* bristlelike, 2-cut.—*Flowers* of the centre male, barren, of the rays hermaphrodite, fertile.

Turgenia latifolia. *Broad-leaved bur-parsley.*

Leaves pinnate, serrated.

Caucalis arvensis echinata latifolia, *Raii Syn.* 219, 2.
Caucalis apii foliis flore rubro, *Ger. em.* 1021, 2.
Echinophora arvensis latifolia purpurea, *Park.* 920.
Caucalis Anglica flore rubente, *Park.* 920.
Caucalis major sature rubente flore, *Park.* 919.
Tordylium latifolium, *Lin. S. P.* 345.
Caucalis latifolium, *Lin. Syst. Veg. ed.* 12, 205.
Turgenia latifolia, *Hoffmann Umbell.* 59.

Chalky corn-fields; annual; July.

Stem 3 feet high, rough; *leaves* lanceolate, decurrent, rough; *umbells* opposite to the leaves or terminal, 3 or 4-rayed; umbellules many-flowered; *flowers* reddish; *fruits* 4 or 5, bristled, bristles purplish.

VI. 271. CEREFOLIUM. Tabernæmontanus. *Chervil.*

Involucrum 0; *involucella* 3 to 5-leaved; *calyx* 0; *petals* flat, reverse ovate, reverse heartshape; lacinule inflected, very short, pointed; *fruit* ovate, oblong; *akenium* oblong, awlshape, half round, bald, ribless, without vittæ, beaked; beak short, 5-ribbed, terminated by the styles and stylopodium; *spermapodium* bristlelike, split at top; *spermapodophore* naked.

1. *Cerefolium sylvestre.* *Wild chervil.*

Stem furrowed, joints turned; *leaves* smooth; *ribs* of the beak blunt.

Cicutaria vulgaris, *Raii Syn.* 207, 1.
Cicutaria alba, Historiæ Lugd. *Ger. em.* 1038, 6.
Myrrhis sylvestris, *Park.* 935.
Cerefolium sylvestre, *Dillen Cat. Giess.* 51.
Chærophyllum sylvestre, *Lin. S. P.* 369.
Anthriscus sylvestre, *Hoffm. Umbell.* 40.
Wild cicely. Cow-weed.

Fields and hedges; perennial; April and May.

Root lactescent; *stem* 3 feet high, much branched; *leaves* tripinnate; *leaflets* acutely cut; *involucella* fringed.—*Roots* poisonous; herb occasionally used as a potherb, is much liked by cows, dyes a beautiful green; umbells dye yellow; plant indicates a fruitful soil.

2. *Cerefolium sativum.* *Cultivated chervil.*

Stem smooth, bald; *akenium* bald, shining; *ribs* of the beak acute.

Cerefolium vulgare sativum, *Ger. em.* 1038, 1.
Scandix Cerefolium, *Lin. S. P.* 368.
Chærophyllum sativum, *Gærtner Fr. et Sem.* 1, 23.
Chærophyllum Cerefolium, *Crantz. Austr.* 191.
Cerefolium sativum, *Besser Fl. Gall.* 1, 218.

Fields, also cultivated; annual; July.

Herb shining, pale; *stem* 2 feet high, branchy; *leaves* bipinnate, cut; *umbells* terminal and lateral, nearly sessile, 4 or 5-rayed.—*Herb* slightly aromatic, used in salads.

VII. 272. ANTHRISCUS. Pliny. *Rough-chervil.*

Involucrum 0; *involucella* 3 to 5-leaved; *calyx* 0; *petals* flat, reverse ovate, reverse heartshape; lacinule inflected or very short, pointed; *fruit* ovate, oblong; *akenium* oblong, awlshape, half-round, ribless, muricated; vittæ 0; beak short, 5-ribbed, terminated by the stylopodium and style; *spermapodium* awlshape, tip 2-cut; *spermapodophore* fringed.

Anthriscus vulgaris. *Common rough-chervil.*

Stem equal; *leaves* prickly; prickles hooked, bald.

Caucalis q. Myrrhis sylvestris seminibus asperis C. Bauhini, *Raii Syn.* 220, 7.
Cerefolium sive Myrrhis æquicolorum nova, *Ger. em.* 1038, 5.
Myrrhis sylvestris Neapolitana, atque etiam Anglicana, *Park.* 935.
Scandix Anthriscus, *Lin. S. P.* 368.
Caucalis Scandix, *Scop. Carn.* 2, 312.
Chærophyllum Anthriscus, *Villars Delph.* 643.
Caucalis scandicina, *Roth Germ.* 2, 312.
Anthriscus vulgaris, *Persoon Syn.* 1, 320.
Anthriscus Caucalis, *Marsch. Fl. Taur. Cauc.* 1, 280.
Small hemlock chervil.

Hedges and ruins; annual; May.

Stem 3 feet high, shining; *leaves* light green, hirsute, tripinnate; leaflets lobed; *umbells* lateral and terminal, 4 or 5-rayed.—*Herb* a warm salad.

VIII. 273. SCANDIX. Theophrastus. *Shepherds-needle.*

Involucrum 0; *involucella* jagged; *petals* nearly equal, reverse ovate; lacinule inflected, pointed; *fruit* oblong, ribbed, compressed, beaked; beak very long; valves opening contrary to the parting of the fruit; *spermapodium* bristlelike; *spermapodophore* supported by 2 appendages.

Scandix vulgaris. *Common shepherds-needle.*

Leaves bipinnate; leaflets pinnatifid; lobes linear, lanceolate, mucronulate; *involucella* cut.

Scandix semine rostrato vulgaris, *Raii Syn.* 207, 1.
Pecten Veneris, sive Scandix, *Ger. em.* 1040, 1.
Scandix vulgaris, seu Pecten Veneris, *Park.* 916.
Scandix Pecten Veneris, *Lin. S. P.* 368.
Scandix Pecten, *Persoon Syn.* 319.
Venus' comb. Our lady's comb. Needle chervil.

Corn-fields; annual; June and July.

Stem spreading; *leaves* smooth; *umbells* terminal, 2 or 3-rayed.

IX. 274. MYRRHIS. Dioscorides. *Cicely.*

Involucrum 0; *involucella* many-leaved; *petals* unequal, reverse ovate, 2-lobed; lacinule short, subulate; *fruit* oblong, beaked; beak 1-4th its length; *akenium* 5-jugated, ending in an awlshape stylopodium; *spermapodium* compressed, bristlelike, 2-cut.

Myrrhis odorata. *Sweet cicely.*

Cerefolium magnum, sive Myrrhis, *Ger. em.* 1039, 3.
Myrrhis major vulgaris, sive Cerefolium majus, *Park.* 935.
Scandix odorata, *Lin. S. P.* 368.
Odorata, *Rivinus Pent.* 56.
Chærophyllum odoratum, *Lamarck Encyc. Meth.* 1, 683.
Myrrhis odorata, *Allioni Pedem.* 2, 28.
Great chervil. Myrrhe. Sweet chervil.

Mountainous fields; perennial; May.

Root aromatic; *stem* 18 in. high, streaked; *leaves* tripinnate, pale green; *umbells* terminal, many-rayed; *akenium* very large, shining, brown, aromatic.—*Akenia* used in the North to polish and scent floors and furniture.

X. 275. CHÆROPHYLLUM. Dioscor. *Cow-parsley.*

Involucrum 0; *involucella* many-leaved; *calyx* 0; *petals* nearly equal, reverse heartshape, 2-lobed; lacinule short, inflected, oblique, channelled, pointed; *fruit* oblong, ending in a conical stylopodium and style; *akenium* linear, awl-shape, 5-ribbed; vallecules 4-vittated; *spermapodium* bristlelike, compressed, cut at the tip.

1. *Chærophyllum aureum.* *Golden cow-parsley.*

Stem tumid, angular, pilose; *leaves* pinnatifid, pointed, cut; *akenia* coloured; *style* longer than the stylopodium.

Chærophyllum aureum, *Lin. S. P.* 370.

Edges of fields; perennial; June.

Stem 3 feet high, solid, deflexed, hairy; *umbell* flat; *akenium* tawny, yellowish, smooth.

2. *Chærophyllum temulentum.* *Intoxicating cow-parsley.*

Stem spotted, below hispid; joints tumid; *leaflets* ovate, lobed, blunt.

Cerefolium sylvestre, *Raii Syn.* 207, 1; *Ger. em.* 1038, 2; *Park.* 915.
Myrrhis, *Rivinus Pent.* 49.
Chærophyllum temulentum, *Lin. S. P.* 370.
Myrrhis temula, *Gærtn. Fr. et Sem.* 1, 22.
Chærophyllum temulum, *Willd. S. P.* 1454.
Scandix temula, *Roth Germ.* 2, 317.
Scandix nutans, *Mœnch Meth.* 101.
Wild chervil.

Hedges; biennial; June and July.

Stem 3 feet high, obscurely striated; *leaves* bipinnate, hirsute; *umbells* drooping until they flower.

XI. 276. DREPANOPHYLLUM. Mœnch.

Involucrum and *involucella* many-leaved, mostly cut; *flowers* barren and fertile; *calyx* 5-toothed, unequal; *petals* obovate, nicked, lobes equal; lacinule channelled, tip blunt; *stigma* capitate; *fruit* ovate, crowned with the calyx, scaly stylopodium and reflected style; *akenium* half-ovate, linear, oblong, 5-ribbed; ribs blunt; vallecules 4, slender, 1-vittated; *spermapodium* bristlelike, 2-cut.

Drepanophyllum palustre. *Marsh drepanophyllum.*

Root-leaves nearly bipinnate; *stem-leaves* pinnate; leaflets oblong, lanceolate, serrated, teeth acute, equal.

Sium latifolium foliis variis, *Raii Syn.* 211, 3.
Sium majus latifolium, *Ger. em.* 256.
Sium latifolium, *Bauh. Pin.* 15; *Lin. S. P.* 361.
Coriandrium latifolium, *Drantz Austr.* 212.
Drepanophyllum palustre, *Hoffmann Umb.* 110.
Great water parsnep. Broad-leaved water-parsnep.

Bogs and rivulets; perennial; July and August.

Root creeping; *stem* angular; *leaves* bald; leaflets mostly 7, lowermost sometimes cut; *umbells* terminal and lateral, flattish.—*Plant* acrid; roots supposed to be poisonous.

XII. 277. SIUM. Dioscorides. *Water-parsnep.*

Involucrum 0, or many-leaved, deciduous; *involucella* many-leaved, ovate; *calyx* slightly 5-toothed; *petals* equal, reverse heartshape, nicked; lacinule channelled, tip 2-cut, inflected; *fruit* ovate; *akenium* semi-ovate, 5-ribbed; ribs blunt; *spermopodium* bristlelike, 2-cut.

1. *Sium erectum.* *Upright water-parsnep.*

Stem upright; *leaves* pinnate; leaflets unequally lobed and serrated; *umbells* peduncled, opposite to the leaves.

Sium sive Apium palustre foliis oblongis, *Raii Syn.* 211, 4.
Sium majus angustifolium, *Ger. em.* 256, 2.
Sium minus alternum, *Park.* 1241.
Sium angustifolium, *Lin. S. P.* 1672.
Sium erectum, *Hudson Fl. Angl. ed.* 1, 103.
Sium nodiflorum, *Flor. Danica*, 247.
Narrow-leaved water-parsnep.

Ditches and rivulets; perennial; July and August.

Stem streaked; *leaves* quite bald; *umbells* hemispherical.

2. *Sium nodiflorum.* *Joint-flowering water-parsnep.*

Stem procumbent; *leaves* pinnate; leaflets equal, ovate, unequally serrated; *umbells* sessile, opposite to the leaves.

Sium umbellatum repens, *Raii Syn.* 211, 5; *Ger. em.* 256, 3.
Sium nodiflorum, *Lin. S. P.* 361.
Creeping water-parsnep.

Watery places; perennial; July and August.

Root creeping; *stem* prostrate or swimming; *leaflets* 5 or 9, sessile; *umbells* nearly sessile, 5 or 7-cut; *involucrum* deciduous.—*Juice* in doses of 2 to 4 oz. either alone, or with milk, every morning, an excellent alterative in obstinate cutaneous diseases.

3. *Sium repens.* *Creeping water-parsnep.*

Stem prostrate, creeping; *leaves* pinnate; leaflets roundish, toothed, incised; terminal leaflet largest, 3-lobed; *umbells* peduncled, opposite to the leaves.

Sium repens, *Lin. Suppl. Pl.* 181.

Marshes and inundated bogs; perennial; June to Aug.

Leaflets roundish or wedgeshape, veiny; *umbells* 4 or 5-cut.

4. *Sium verticillatum.* *Whirled water-parsnep.*

Stem upright; *leaves* pinnate; leaflets digitate, many-cut; lobes hairlike, divaricated, spread.

Sison verticillatum, *Lin. S. P.* 363.
Sium verticillatum, *Smith Fl. Brit.* 314.

Salt marshes; perennial; July and August.

Root tuberculate; tubercles many, turnipshape; *stem* slightly branched; *leaves* mostly radical; *umbells* terminal, many-cut; *involucrum* 5-leaved, deflexed; *involucella* many-leaved.

5. *Sium aromaticum.* *Spicy water-parsnep.*

Stem upright; *leaves* pinnate, leaflets ovate, toothed; *umbells* upright.

Sium aromaticum Sison officinarum, *Raii Syn.* 211, 1.
Petroselinum Macedonicum Fuchsii, *Ger. em.* 1016, 1.
Sison vulgare, vel Amomum Germanicum, *Park.* 914.
Sison Amomum, *Lin. S. P.* 362.
Sium Amomum, *De Candolle Fl. Gall.* 3456.
Bastard stone-parsley. Hedge honewort.

Damp chalk or clay soils; annual; August.

Stem 2 feet high, much branched; *uppermost leaflets* slenderest, sometimes pinnatifid; *umbells* terminal, 4-cut, upright while flowering.

6. *Sium segetum.* *Harvest water-parsnep.*

Stem upright; *leaves* pinnatifid; leaflets many, roundish, toothed; *umbellules* drooping.

Sium arvense sive segetum, *Raii Syn.* 211, 2.
Selinum sii foliis, *Ger. em.* 1018.
Selinum segetale. *Park.* 932.
Sison segetum, *Lin. S. P.* 362.
Sium segetum, *De Candolle Fl. Gall.* 355.
Honewort. Corn-parsley.

Damp chalky corn-fields; annual; August.

Stem branched; *leaflets* ovate; terminal 3-cut; *umbells* terminal, 2 or 3-cut; *umbellules* 4 or 5-flowered.

7. *Sium inundatum.* *Inundation water-parsnep.*

Stem creeping; *lower leaves* submersed, many-parted, hairlike, upper leaves pinnatifid, cut; *umbells* 2 or 3-rayed.

Sium pusillum foliis variis, *Raii Syn.* 212, 6.
Sison inundatum, *Lin. S. P.* 363.
Hydrocotyle inundatum, *Smith Fl. Brit.* 290.
Least water-parsnep. Floating white-root.

Standing water and inundations; annual; May.

Stem floating; *leaves* decompound; upper leaflets oblong, 3-cut or pinnate; *umbells* 2-cut, peduncled, opposite to the leaves; *umbellules* 5-flowered.

XIII. 278. HYDROCOTYLE. Tournef. *Marsh-pennywort.*

Umbells simple, pedicelled; *involucrum* 2 or 4-leaved; calyx 0; *petals* 5, lanceolate, equal; lacinule inflexed, acute; *fruit* orbicular, compressed sideways, gibbous; *akenium* circular, lenticular; edge thin; ribs 3, blunt; vallecules very broad.

Hydrocotyle vulgare. *Common marsh-pennywort.*

Leaves peltate, orbicular, crenate; *umbells* 5 or 8-flowered.

Hydrocotyle vulgaris, *Raii Syn.* 222, 1; *Lin. S. P.* 338.
Cotyledon palustris, *Ger. em.* 529, 5.
Water pennywort. Sheepkilling pennygrasse. Pennyrot. White rot. Flowkwort.

Bogs and watery places; perennial; May and June.

Stem creeping; *leaves* opposite, petioled, limb horizontal, pale green, shining; *peduncles* axillary, solitary, or in pairs; *bracteæ* 2, ovate, scariose; *umbells* often proliferous. —Supposed to render sheep dropsical, or rot them.

XIV. 279. CICUTA. Pliny. *Cow-bane.*

Involucrum 0, or few-leaved; *involucella* many-leaved; *calyx* 5-toothed; *petals* reverse ovate, heartshape; lacinule lanceolate, pointed; *fruit* roundish, crowned; *akenium* ovate, semiglobose, beaked; ribs 5, torulose; dorsal vallecules convex, 1-vittated; commissural 2-vittated, in a membrane; *spermapodium* 2-parted; *spermapodophore* very short, within the base of the akenia.

Cicuta virosa. *Poisonous cowbane.*

Leaves pinnate; *leaflets* bald, lanceolate, serrate; *umbells* opposite to the leaves; *fruit* 2-globular.

Sium alterum olusatri facie, *Raii Syn.* 212, 1; *Ger. em.* 256, 4.
Sium majus alterum angustifolium, *Park.* 1241.
Cicutaria, *Rivinus Pent. reg.*
Cicuta virosa, *Lin. S. P.* 366.
Cicuta aquatica, *De Cand. Fl. Gall.* 3438.
Coriandrum Cicuta, *Roth Germ.* 130.
Long-leaved watercresses. Long-leaved water-hemlock. Water cowbane.

Ditches and river-sides; perennial; August.

Root tuberous; juice yellowish; *stem* 3 feet high, light green; *leaves* 2 or 3-pinnate; uppermost pinnate; *umbells* many rayed, convex.—Poisonous to mankind and kine, but not to horses, sheep, or goats; the smell being weak in the spring, cows are apt to be killed by it, but afterwards the odour enables them to avoid it.

XV. 280. PHELLANDRIUM. Pliny. *Water-hemlock.*

Involucrum 0; *involucella* many-leaved; *flowers* peduncled; rays fertile; *calyx* 5-toothed, 2 larger; *petals* nearly equal, reverse heartshape; lacinule short, awlshape; *fruit* ovate, oblong, crowned; *akenium* ovate, oblong; ribs 5, marginal rib much the thickest; *dorsal vallecules* 4, 1-vittated; commissural 2, bowed; *spermapodium* divided.

Phellandrium divaricatum. *Spreading water-hemlock.*
Leaves tripinnate, cut; leaflets and lobes divaricating.

Phellandrium sive Cicutaria quorundam, *Raii Syn.* 215, 1.
Cicutaria palustris, *Ger. em.* 1063, 2.
Cicutaria palustris tenuifolia, *Park.* 933.
Phellandrium aquaticum, *Lin. S. P.* 366.
Ligusticum Phellandrium, *Crantz Austr.* 200.
Œnanthe Phellandrium, *Lamarck Fl. Fr.* 432.
Horsebane.

Ditches and rivers; biennial; June and July.

Root fusiform; fibres verticillate; *stem* flexuous; *leaves* spreading; *umbells* opposite to the leaves, many-rayed.—Renders horses paralytic, the disease being brought by an insect, the curculio paraplecticus, which inhabits the stems, and is cured by pigs' dung; leaves discutient in poultices; seeds used in doses of 1 to 3 drms. daily, in agues.

β. *fluitans.* *Leaves* floating, very long, transparent.

Phellandrium q. Millefolium aquaticum Matthioli, *Raii Syn.* 216, 1.*
Millefolium aquaticum, *Ger. em.* 827, 2.
Millefolium aquaticum vulgatius, *Park.* 1256.
Water-yarrow. Water-fennel.

XVI. 281. ŒNANTHE. Theophrastus. *Water-dropwort.*

Involucrum 0, 1 or many-leaved; *involucella* many-leaved; *flowers* peduncled, of the centre sessile, fertile; of the rays barren; *calyx* 5-toothed, teeth connate, 3 larger; *petals* difform, radiating, 2-lobed; lacinule long, awlshape; *fruit* ovate, crowned; *akenium* ovate, semicylindrical; ribs 5, torulose, barked; marginal thickest; *dorsal vallecules* 4-vittated; commissural 2-vittated, vittæ parallel; *spermapodium* divided.

1. *Œnanthe crocata.* *Yellow water-dropwort.*

Leaves bipinnate; leaflets all wedgeshape, many-cut, nearly equal; *involucrum* many-leaved.

Œnanthe cicutæ facie Lobelii, *Raii Syn.* 210, 3; *Park.* 894.
Filipendula cicutæ facie, *Ger. em.* 1059, 4.
Œnanthe crocata, *Lin. S. P.* 365.
Hemlock dropwort. Dead tongue. Water lovage.

Water-sides; perennial; July.

Root tuberous; tubers blunt, sessile, crowded; *stem* upright, 4 feet high; *leaves* dark green, bald; *umbells* terminal, many-rayed, hemispherical.—Juice of the root, or an infusion of the leaves in small doses, very efficacious in obstinate cutaneous diseases; in large doses produces a fatal tetanus; herb applied as a poultice to ulcers that form in the cleft of the hoof in kine.

2. *Œnanthe pimpinelloides.* *Pimpernell water-dropwort.*

Root-leaves 2-pinnate; leaflets wedgeshape, cut; stem-leaves pinnate; leaflets linear, not cut, long; *involucrum* many-leaved, linear.

Œnanthe staphylini folio aliquatenus accedens, *Raii Syn.* 210, 4.
Œnanthe pimpinelloides, *Lin. S. P.* 366.
Parsley water-dropwort.

Salt marshes; perennial; June.

Root tuberous; tubers slender, fusiform, peduncled; *stem* slightly branched; *umbells* terminal, many-rayed, flattish; *involucrum* rarely 1-leaved.

3. *Œnanthe peucedanifolia.* *Hogs-fennel water-dropwort.*

Root-leaves 2-pinnate; stem-leaves pinnate; leaflets all linear, pointed; *involucrum* 0; *fruit* rather cylindrical; *tubers* elliptical, sessile.

Filipendula angustifolia, *Ger. em.* 1059, 3.
Œnanthe peucedanifolia, *Pollich Pal.* 6, 289.
Narrow dropwort.

Ditches and marshes; perennial; June.

Root tuberous; tubers crowded; *stem* slightly branched, stronger than the former; *umbells* many-rayed; umbellules flat; centre reddish; rays white.

4. *Œnanthe fistulosa.* *Pipey water-dropwort.*

Root-leaves 2-pinnate; leaflets wedgeshape, flat; stem-leaves pinnate; leaflets and petioles cylindrical, pipey; *involucrum* scarcely any.

Œnanthe aquatica, *Raii Syn.* 210, 1.
Filipendula aquatica, *Ger. em.* 1060, 5.
Œnanthe aquatica major, *Park.* 1233.
Œnanthe fistulosa, *Lin. S. P.* 365.
Common water-dropwort.

Bogs and standing waters; perennial; July and August.

Root stoloniferous; *stem* 2 feet high, fistulous, bald; *root-leaves* sunk; *umbells* alternate with the leaves, 3 to 7-rayed; *involucrum* 1, 3, or 5-leaved; *petals* flesh-colour.

XVII. 282. ECHINOPHORA. Columna. *Sea-parsnep.*

Involucrum 3 to 5-leaved, pinnate, spinous; *involucella* 1-leaved, topshape, unequally 6-cut; *umbells* radiated; *flowers* of the centre sessile, female; petals nicked: of the rays pedicelled, male; calyx 5-toothed; petals unequal, spreading; lacinule long, lanceolate, many-cut; *fruit* crowned with the hardened involucrum and shining persistent pedicells of the male flowers; *akenia* 2, 1 mostly barren.

Echinophora spinosa. *Spinous sea parsnep.*

Leaves pinnate; leaflets awlshape, spinous, 3-cut or not cut at all.

Echinophora maritima spinosa, *Raii Syn.* 220, 1.
Crithmum spinosum, *Ger. em.* 533.
Crithmum maritimum spinosum, seu Pastinaca marina, *Park.* 1286.
Echinophora spinosa, *Lin. S. P.* 344.
Prickly samphire.

Sandy sea-shores; perennial; July.

Root fusiform, fleshy; *stem* much branched; *leaves* opposite; *umbells* terminal, large.

XVIII. 283. CRITHMUM. *Samphire.*

Involucrum and *involucella* many-leaved; *calyx* 5-toothed; teeth unequal, large; *petals* reverse ovate, keeled, nearly equal; lacinule long, lanceolate, blunt; *fruit* ovate, oblong, crowned; *akenium* semi-ovate, 5-ribbed, barked, spongy.

Crithmum maritimum. *Sea-samphire.*

Leaves triternate; leaflets lanceolate, acute, fleshy.

Crithmum marinum, *Raii Syn.* 217, 1; *Ger. em.* 533, 1.
Crithmum marinum vulgare, *Park.* 1286.
Crithmum maritimum, *Lin. S. P.* 354.
Herbe de Sainte Pierre. *Rock samphire.*

Rocks on the sea-side; perennial; August.

Root torulose; *stem* 12 inches high, rather branched; *leaves* glaucous, bald; *umbells* terminal, hemispherical; umbellules crowded.—Herb in fruit pickled, used as sauce.

XIX. 284. PIMPINELLA. Myrepsus. *Burnet-saxifrage.*

Involucrum and *involucella* 0; *calyx* 0; *petals* nearly equal, bald, ovate, nicked; lacinule contracted, inflexed, channelled, crenulated; *stigma* globular; *fruit* ovate, roundish; *akenium* ovate, 5-ribbed; vallecules rather convex, many vittated; *commissures* banded, band white, longitudinal, in the middle; *spermapodium* bristlelike, 2-cut.—*Umbells* before flowering drooping.

1. *Pimpinella minor.* *Small burnet-saxifrage.*

Stem striated, bald; *leaves* pinnate, bald; leaflets of the root-leaves roundish, acutely toothed; of the stem-leaves bipinnate, linear.

Pimpinella saxifraga minor foliis sanguisorbæ, *Raii Syn.* 213, 2.
Bipinella, sive Saxifraga minor, *Ger. em.* 1044, 2.
Pimpinella saxifraga major nostras, *Park.* 946.
Pimpinella saxifraga, *Lin. S. P.* 378.
Pimpinella rotundifolia, *Scopoli Carn.* 344.
Tragoselinum Saxifraga, *Mœnch Meth.* 99.

Dry pastures; perennial; July and August.

Root aromatic; *stem* upright, rather rough; *flower-leaves* strapshape or ternate.

2. *Pimpinella nigra.* *Black burnet-saxifrage.*

Stem streaked, pubescent; *leaves* pinnate, pubescent; leaflets of the root-leaves nearly heartshape, cut, bluntly toothed; of the stem-leaves bipinnate, linear.

Pimpinella nigra, *Willd. S. P.* 1471.
Pimpinella Saxifraga ε, *Retz. Obs.* 3, 45.

Dry pastures; perennial; July and August.

Root aromatic; juice bluish; *stem* and *leaves* white, tomentose.—Root yields a blue essential oil, and communicates a blue colour to water or spirit when they are distilled from it.

3. *Pimpinella major.* *Great burnet-saxifrage.*

Stem streaked, bald; *leaves* all pinnate, bald; leaflets ovate; lobes serrated; terminal leaflets 3-lobed.

Pimpinella Saxifraga, *Raii Syn.* 213, 1; *Ger. em.* 1044, 1.
Pimpinella Saxifraga hircina major, *Park.* 947.
Pimpinella Saxifraga, *Hudson Fl. Angl.* 127.
Pimpinella magna, *Lin. Mant.* 2, 219.

Woods and chalky fields; perennial; July and August.

Stem 2 feet high; *umbells* large, white.—*Root* acrid, tasting like pepper, sialogogue, used as a masticatory in tooth-ach, also externally to take away freckles, and in gargles to dissolve viscid mucus.

β. rubra. *Corolla* reddish purple.

Pimpinella flore rubro, *Rivinus Pent.* 81.

γ. laciniata. *Leaves* much cut.

Pimpinella Saxifraga major, degener, seu foliis dissectis, *Rail Syn.* 213, 1.*

4. *Pimpinella media.* *Middlesize burnet-saxifrage.*

Stem streaked, bald; *leaves* pinnate; leaflets of the root-leaves nearly heartshape, 3-lobed, serrated; of the stem-leaves angularly cut.

Pimpinella orientalis, *Jacq. Austr.* 397.
Pimpinella media, *Hoffmann Fl. Germ.* 1, 146.
Pimpinella Saxifraga, 6, *Withering Bot. Arr.* 393.

Dry gravelly places; perennial; August and September.

5. *Pimpinella dissecta.* *Cut burnet-saxifrage.*

Leaves all pinnate; leaflets many-parted; lobes falcate and acute.

Pimpinella saxifraga minor, *Raii Syn.* 213, 3.
Pimpinella saxifraga hircina minor, *Park.* 947.
Pimpinella dissecta, *Retz. Obs.* 3, 30.

Dry, sandy, and chalk fields; perennial; July and Aug.

XX. 285. TRINIA. Hoffmann. *Rock-parsley.*

Dioicous—*Involucrum* and *involucella* few-leaved or deciduous; *petals* 5, equal, ovate, lanceolate; lacinule lanceolate, inflexed. — MALE. *Calyx* 5-toothed; *stamens* 5. — HERM. *Calyx* 0; *stamens* 5, imperfect; *fruit* ovate, crowned; *akenium* ovate, roundish, 5-jugate; jugæ sunk in, ribbed; vallecules 4, 1-vittated; raphe margined; *spermapodium* bristlelike, 2-cut, dilated in the middle.

Trinia glaberrima. *Very-bald rock-parsley.*

Dioicous; leaves bipinnate; leaflets ternate; lobes equal, linear; *umbells* panicled.

Peucedanum minus, *Raii Syn.* 217, 1; *Park.* 880.
Peucedanum pumelum, *Ger. em.* 10.
Seseli pumilum, *Lin. S. P.* 373.
Pimpinella pumila, *Jacquin Austr.* 28.
Pimpinella dioica, *Lin. Syst. Veg. ed.* 13, 241.
Trinia glaberrima, *Hoffm. Umbelli*, 93.

Limestone rocks; perennial; May and June.

Root fleshy; *stem* 9 inches high, branchy, purplish; *leaves* glaucous, smooth; *umbells* many, panicled, upright.

XXI. 286. ÆTHUSA. Linnæus. *Fools-parsley.*

Involucrum 0; *involucella* halved, 3-leaved, pendulous; *petals* unequal, nicked, 2-lobed, with a hollow on each side; lacinule short, linear, blunt; *fruit* rather globular, crowned; *akenium* ovate, barked, 5-jugated; marginal jugæ acute, membranaceous; vallecules 4, acute, 1-vittated; commissure quite flat, 2-vittated; *spermopodium* hairlike, 2-cut.

Æthusa tenuifolia. *Fine-leaved fools-parsley.*

Leaves bipinnate; leaflets pinnatifid; *involucella* linear, lanceolate, longer than the umbellules; *commissural vittæ* distant at the base.

Cicuta quæ Cicutaria tenuifolia, *Raii Syn.* 215, 2.
Cicutaria tenuifolia, *Ger. em.* 1063, 1.
Cicuta minor, sive fatua, *Park.* 933.
Cynapium, *Rivinus Pentap.* 75.
Æthusa Cynapium, *Lin. S. P.* 367.
Coriandrum cynapium, *Crantz Austr.* 111.
Lesser hemlock. Dog's parsley.

Gardens and fields; annual; July and August.

Root fusiform; *stem* slightly branched; *leaves* dark green, bald; *umbells* terminal or opposite to the leaves; *peduncles* long.—When eaten in mistake for parsley it occasions vomiting, which may be stopped by a very large dose of brandy: deleterious to geese.

XXII. 287. CONIUM. Theophrastus. *Hemlock.*

Involucrum 2 to 5-leaved; *involucella* 3-leaved, 1-rowed, connate; *petals* nearly equal, reverse heartshape, nicked; lacinule short, blunt; *fruit* ovate, globose, crowned; *akenium* ovate, 5-ribbed; ribs waved, crenulate; vallecules and commissures many-streaked; vittæ 0; *spermapodium* bristle-like, 2-cut.

Conium maculatum. *Spotted hemlock.*

Root fusiform; *stem* spotted, smooth; *upper leaves* decompound; leaflets pinnatifid; *lacinule* linear, lanceolate, mucronate.

Cicuta, *Raii Syn.* 215, 1; *Ger. em.* 1061, 1.
Cicuta vulgaris major, *Park.* 933.
Conium maculatum, *Lin. S. P.* 349.
Cicuta maculata, *Lamarck Fl. Fr.* 104.
Cicuta major, *De Candolle Fl. Gall.* 3494.
Hemlock. Homlock. Kex. Herb bennet.

Walls and shady places; biennial; June and July.

Root white; *stem* 4 feet high, shining, much branched at top; *leaves* shining, bald, of a strong odour; *umbells* and *umbellules* many-rayed.—Root supposed poisonous, but Petiver, after seeing Mr. Henley eat between three and four ounces, eat himself half an ounce without any ill effect, it tasted like celeri; leaves in powder narcotic, alterant, used in cancer, chronic rheumatism, and obstinate ulcers; inspissated juice used for the same purposes, and in gonorrhœa, but is less efficacious than the powdered leaves. Chærophyllum temulentum, 275, 2, having a spotted stalk is sometimes used for it; and the extract is also sold for that of conium maculatum.

XXIII. 288. BUNIUM. Dioscorides. *Earth-nut.*

Involucrum 1, 3, or many-leaved; *involucella* many-leaved; *calyx* 0; *petals* nearly equal, broad, heartshape, nicked, edge inflected; lacinule short, blunt, inflected; *fruit* oblong, ellipsoid, crowned; *akenium* linear, elliptical, straight but rather bent at top, 5-ribbed; ribs streaked or folded, with a narrow edge on each side; vallecules wrinkled, convex, 1-vittated; vittæ rather broad, short, kneed, wrinkled; *spermapodium* 2-cut.

1. *Bunium majus.* *Great earth-nut.*

Stem straight at bottom, leafy; *leaves* uniform, tripinnate, bald; *petioles* nearly equal; *involucrum* many-leaved; *fruit* nearly cylindrical, thick at top; *style* reflex, falling off.

Bulbocastanon majus, *Ger. em.* 1064, 2.
Nucula terrestris major, *Park.* 893.
Bunium Bulbocastanum, *Lin. S. P.* 349.
Bunium minus, *Gouan Illustr.* 10.
Pimpinella Bulbocastanum, *Stokes Bot. Mat. Med.* 147.

Fields and pastures; perennial; May.

Tubers roundish; *stem* branched, bald; *leaves* triternate; lobes linear, cuts 3 or 0; *umbells* terminal, many-rayed; *involucrum* shorter than the rays.

2. *Bunium minus.* *Lesser earth-nut.*

Stem flexuous, small and leafless at bottom; *leaves* tripinnate, nearly sessile, slender, linear; *involucrum* 0, 2, or 3-leaved; *fruit* ovate; *style* spreading, persistent.

Bulbostanum, *Raii Syn.* 209, 1.
Bulbocastanon minus, *Ger. em.* 1064, 1.
Nucula terrestris minor, *Park.* 892.
Bunium Bulbocastanum, *Huds. Fl. Angl.* 122.
Bunium flexuosum, *With. Bot. Arr.* 291.
Bunium majus, *Gouan Illustr.* 10.
Pimpinella flexuosa, *Stokes Bot. Mat. Med.* 145.
Kipper nut. Pig nut. Hawk nut. Jur nut. Earth chestnut.

Sandy fields and pastures; perennial; May and June.

Stem rather branched; *lobes* of the leaves slender, pointed; *umbells* 8 or 10-cut.

XXIV. 289. ÆGOPODIUM. Linnæus. *Gout-wort.*

Involucrum and *involucella* 0; *calyx* 0; *petals* equal, reverse ovate, cut; lobes parallel; lacinule short, inflexed, channelled, pointed; *fruit* elliptical, ovate, crowned; *akenium* oblong, 5-ribbed; ribs threadshape; vallecules rather convex; vittæ 3; *spermapodium* bristlelike, forked at the tip.

Ægopodium angelicæfolium. Angelica-leaved gout-wort.

Angelica sylvestris minor, seu erratica, *Raii Syn.* 208, 3.
Herba Gerardi, *Ger. em.* 1001, 2.
Podagraria vulgaris, *Park.* 943.
Ægopodium Podagraria, *Lin. S. P.* 379.
Seseli Ægopodium, *Scop. Carn. ed.* 2, 359.
Pimpinella angelicæfolia, *Lamarck Enc. Meth.* 1, 451.
Sison Podagraria, *Sprengel Umbell.* 35.
Ligusticum Podagraria, *Roth Germ.* 124.
Apium biternatum, *Stokes Bot. Mat. Med.* 150.
Herb Gerard. Ash weed. Gout weed.

Gardens and fields; perennial; May.

Root creeping.—*Leaves* smell like those of angelica, and may be eaten in early spring salads.

XXV. 290. CARUM. Dioscorides. *Carui.*

Involucrum 0; *involucella* often 0; *calyx* scarcely toothed; *petals* nearly equal, reverse heartshape, nicked, keeled, concave; lacinule short, pointed, inflexed; *fruit* ovate, elliptical, crowned; *akenium* linear, oblong, gibbous; ribs 5; vallecules 3-streaked, middle streak vittated, exserted, kneed; *spermapodium* bristlelike, slightly 2-cut.

Carum officinale. Shop carui.

Leaves pinnate; lobes sessile, segments linear, lanceolate.

Carum seu Careum, *Raii Syn.* 213, 1; *Ger. em.* 1034.
Carum vulgare, *Park.* 910.
Carum Carui, *Lin. S. P.* 378.
Seseli Carum, *Scopoli Carn.* 361.
Apium Carui, *Crantz Austr.* 218.
Ligusticum Carui, *Roth Germ.* 324.
Seseli Carui, *De Candolle Fl. Fr.* 4, 285.
Bunium Carui, *Marsch Fl. Taur. Cauc.* 1, 211.
Carraway.

Fields and pastures, also cultivated; peren.; June, July.

Root fusiform; *stem* 2 feet high, bald; *leaves* bipinnate; leaflets crossed; *umbells* terminal, white.—Roots superior to parsneps for kitchen use; young leaves used as a pot-herb; seeds used to flavour cakes, to form sugar-plums, and, as they yield much essential oil on distillation, also to flavour ardent spirits and form a carminative distilled water.

XXVI. 291. MEUM. Dioscorides. *Spignel.*

Involucrum 0 or few-leaved, leaves cut; *involucella* many-leaved, halved, cut or whole; *calyx* scaly, toothed; *petals* nearly equal, ovate, keeled; lacinule very short, inflexed, pointed; *fruit* elliptical, oblong, crowned; *akenium* 5-ribbed; ribs sharp, nearly winged; vallecules flattish, finely streaked; *spermapodium* bristlelike, 2-cut.

Meum Athamanticum. *Athamantian spignel.*

Leaves 2 or tripinnate; leaflets bristlelike, many-cut; lobes very slender, bald.

Meum, *Raii Syn.* 207, 1; *Ger. em.* 1052, 1.
Meum vulgatius, *Park.* 888.
Athamanta Meum, *Lin. S. P.* 353.
Æthusa Meum, *Lin. Syst. Veg. ed.* 13, 237.
Ligusticum Meum, *Crantz Austr.* 308.
Carum Meum, *Stokes Bot. Mat. Med.* 138.
Mew. Bear wort. Spicknell. Bald money. Bawd money.

Mountainous pastures; perennial; May.

Root thick, woody, aromatic, fibrous at the tip; *stem* scarcely branched, rather naked; *stipules* dilated; *umbells* many-rayed.

XXVII. 292. LIGUSTICUM. Dioscorides. *Lovage.*

Involucrum 4 or 5-leaved, unequal; *involucella* many-leaved; *calyx* 5-toothed; *petals* nearly equal; ovate, involute; *fruit* oblong, crowned; *akenium* 5-ribbed; ribs membranaceous.

Ligusticum Scoticum. *Scotch lovage.*

Leaves biternate; leaflets nearly rhomboid, deeply serrated.

Ligusticum Scoticum apii folio, *Raii Syn.* 214, 1.
Ligusticum Scoticum, *Lin. S. P.* 359.
Angelica Scotica, *Lamarck Encycl Meth.* 1, 173.
Ligusticum biternatum, *Stokes Bot. Mat. Med.* 1194.
Scotch parsley.

Sea-shore; perennial; July.

Stem slightly branched at top, bald; *upper leaves* often ternate; lobes rather fleshy, bald; *stipules* membranaceous; *umbells* many-rayed, terminal.—*Root* carminative; *leaves* used as a salad or potherb, and an infusion of the leaves as a purgative for calves.

XXVIII. 293. PSEUDOSPERMUM. Sprengel. *Cornwall-saxifrage.*

Involucrum 4 or 8-leaved, unequal, 2 outer longest; *involucella* 3 to 5-leaved; *calyx* 5-toothed, teeth deltoid; *petals* nearly equal, oblong, keeled, naked; lacinule long, dilated, blunt; *fruit* ovate, oblong, crowned; *akenium* ovate, 5-ribbed; ribs blunt; *spermapodium* bristlelike, 2-cut.—*Umbells* many-rayed.

Pseudosperm. commutatum. *Changed Cornwall-saxifrage.*

Leaves ternate; root-leaflets 3-parted; stem-leaflets lanceolate, not cut.

Smyrnium tenuifolium, nostras, *Raii Syn.* 209, 1.
Ligusticum alterum Belgarum, *Park.* 906.
Ligusticum Cornubiense, *Lin. S. P.* 359.
Danaa aquilegifolia, *Allioni Pedem.* 1392.
Ligusticum aquilegifolium, *Willd. S. P.* 1425.
Sison sylvaticum, *Brotero Phyt. Lusit.* 17.
Smyrnium nudicaule, *Marsch Fl. Taur. Cauc.* 1, 238.

Hedges and woods; shrubby; July.

Root fusiform; *stem* 3 feet high; *root-leaves* few, petioled, lobes wedgeshape, narrow; *stem-leaves* 0, or only 1 or 2; *umbells* many-rayed; *involucella* lanceolate, persisting; *flowers* white.

XXIX. 294. LIBANOTIS. Theophrastus. *Stone-parsley.*

Involucrum and *involucella* many-leaved, deflexed; *calyx* 5-toothed; *petals* nearly equal, reverse ovate, heartshape; lacinule inflected, rather long, lanceolate, pointed; *fruit* oblong, crowned; *akenium* oblong, nearly cylindrical, hirsute, tomentose, 5-ribbed; *spermapodium* bristlelike.

Libanotis montana. *Mountain stone-parsley.*

Leaves bipinnate, bald; leaflets pinnatifid, flat; lobes ovate, pointed.

Apium petræum seu montanum album, *Raii Syn.* 218, 1.
Athamanta Libanotis, *Lin. S. P.* 351.
Athamanta Oreoselinum, *Hudson Fl. Angl.* 115.
Libanotis Cretensis, *Gærtner Fr. et Sem.* 1, 84.

High chalky pastures; perennial; August.

Root fusiform, woody, acrid, bitterish; *stem* 2 feet high, very deeply furrowed, rather branchy, bald; *leaves* paler underneath; *umbells* hemispherical; *teeth* of the calyx very long, lanceolate, serrate on the edge.

XXX. 295. THYSSELINUM. Pliny. *Milky-parsley.*

Involucrum and *involucella* many-leaved, reflected; *flowers* all equal; *calyx* 5-toothed; *petals* nearly equal, reverse heartshape, patulous; lacinule linear, channelled, blunt, nicked; *fruit* ovate, roundish, rather compressed, crowned; *akenium* ovate, compressed, margined, 5-ribbed; *endocarp* membranaceous, 6-vittated; *commissural vittæ* distant from the margin; *spermapodium* bristlelike, 2-cut.

Thysselinum palustre. *Marsh milky-parsley.*

Stem streaked; *leaves* bipinnate or tripinnate, bald; leaflets opposite, pinnatifid; lobes linear, lanceolate; *rays* of the umbells downy; *styles* divaricating; *fruit* ovate.

Selinum palustre, *Lin. S. P.* 350.
Selinum sylvestre, *Jacquin Austr.*
Selinum Tysselinum, *Crantz Austr.* 170.
Peucedanum palustre, *Mœnch Meth.* 82.

Bogs; perennial; July.

Root nearly simple; *stem* single, 4 feet high, branchy at top; *umbells* flat; *fruit* ovate, rather roundish, reddish brown; *herb* lactescent; *juice* white, clammy, bitter, fœtid.

XXXI. 296. IMPERATORIA. Matthiolus. *Masterwort.*

Involucrum 0; *involucella* few-leaved, bristlelike; *calyx* 0; *petals* elliptical, nicked, equal; lacinule long, acute, inflected; *fruit* elliptical, compressed, crowned; *akenium* elliptical, compressed, margined; margin winged, 2-cut at the top and bottom, 3-ribbed; ribs sharp, not winged; *commissural vitta* single, bowed, acute. — *Umbells* compressed, flat.

Imperatoria major. *Great masterwort.*

Leaves ternate; leaflets 3-lobed.

Imperatoria, *Ger. em.* 1001, 1; *Park.* 942.
Imperatoria Ostruthium, *Lin. S. P.* 371.
Imperatoria major, *Garid. Prov.* 55.
Selinum Imperatoria, *Stokes Bot. Mat. Med.* 2, 72.
Bastard pellitory of Spain.

Root tuberous; *stem* erect, nearly simple; *umbells* terminal, many-rayed, smooth, flat.—*Root* acrid, acrimonious, used as a sialogogue in rheumatic tooth-ache; recommended internally in dropsy and dyspepsia; an infusion in wine used successfully in quartan agues when bark has failed.

XXXII. 297. ANGELICA. Brunsfel. *Water-angelica.*

Involucrum 0, or few-leaved; *involucella* many-leaved; *flowers* uniform; *calyx* 0; *petals* equal, reverse ovate, pointed, inflected, contracted; *fruit* reverse ovate, 4-angular, winged, ending with the reflected styles; *akenium* reverse ovate, 3-ribbed; ribs approximating, 4-vittated, edge winged; vittæ growing to the inner membrane; commissure flat, keeled, 2-vittated; keel elevated, dilated in the middle, covered with nearly marginal vittæ; *spermapodium* bristle-like, capillary, 2-parted.

Angelica sylvestris. *Wild water-angelica.*

Leaves bipinnate; leaflets ovate, equal, cut, acutely serrated.

Angelica sylvestris, *Raii Syn.* 208, 2; *Ger. em.* 991, 2; *Park.* 940; *Lin. S. P.* 361.
Selinum Angelica, *Roth Fl. Germ.* 2, 358.
Selinum pubescens, *Mœnch Meth.* 80.
Imperatoria sylvestris, *Besser Fl. Gall.* 1, 213.
Wild angelica.

Watery places; perennial; July.

Stem 4 feet high, upright; *leaves* rather glaucous; *umbells* hemispherical.

XXXIII. 298. ARCHANGELICA. Tabernæmontanus. *Angelica.*

Involucrum scarcely any; *involucella* halved, many-leaved; *flowers* difform; *calyx* small, 5-toothed; *petals* equal, ovate; lacinule inflected, acute; *fruit* ovate, turgid; *akenium* 5-ribbed; ribs solid, stuffed, margined with a stiff wing; commissure flat, keeled; keel many-vittated; vittæ lateral, parallel, in the membranous endocarp.

Archangelica officinalis. *Shop angelica.*
Leaves ternate, pinnate; odd-leaflet 3-parted; *akenium* oval, margined; margin rather waved.

Angelica sativa, *Raii Syn.* 208, 1; *Ger. em.* 991, 1; *Park.* 940.
Angelica Archangelica, *Lin. S. P.* 360.
Angelica officinalis, *Mœnch Meth.* 81.
Ligusticum Angelica, *Stokes Bot. Mat. Med.* 2, 96.
Archangelica officinalis, *Hoffmann Umbell.* 168.
Garden angelica. The holy ghost.

Watery places, naturalized, also cultivated; bien.; Sept.
Root fleshy; *stem* 5 feet high, branched; leaflets ovate, lanceolate, cut, acutely serrated, bald; *petals* much dilated at bottom, membranaceous; *umbells* globose, many-rayed. —*Root* aromatic, rather bitter, used mostly candied as an agreeable stimulant, and antipestilential.

XXXIV. 299. SPHONDYLIUM. Diosc. *Cow-parsnep.*

Involucrum caducous; *involucella* many-leaved; *flowers* difform; *petals* radiating, unequally 2-cut; lacinule short, hooked; *fruit* compressed, oval, reverse-ovate; *akenium* ovate, margined, hirsute or rough, crowned; latuscule 3-streaked, 4-vittated; vittæ mostly as broad as the vallecules, thick, rather clubbed; commissural vittæ 2, joined at an acute angle; *spermapodium* threadshape, 2-parted.

Sphondylium vulgare. *Common cow-parsnep.*
Leaves pinnate; leaflets pinnatifid, cut, serrated.

Sphondylium, *Raii Syn.* 205, 1; *Ger. em.* 1009, 1.
Sphondylium vulgare, *Park.* 953.
Heracleum Sphondylium, *Lin. S. P.* 358.
Sphondylium Panaces, *Gærtn.* 1, 86.
Sphondylium Branca, *Scopoli Carn.* 335.
Sphondylium Branca ursina, *Hoffm. Umbell.* 132.
Mad nep. Hogweed. Meadow parsnep. Bears-breech.

Meadows and pastures; biennial; July.
Root fusiform; *stem* 4 feet high, branchy; *leaves* ternate or pinnate, cut, pinnatifid; *petioles* dilated at bottom; *umbells* flat.—*Leaves* and seeds brewed, form a kind of ale drank in Poland and Lithuania; stems peeled, to get rid of the acrid skin, are eaten in Russia; when dried a saccharine substance exudes from them, and attempts have been made to extract sugar from this plant, but 40 lb. of the dried stalks only yielded a qr. of a lb. of powdery sugar; young shoots a very good asparagus.

β. laciniatum. *Leaflets* long, slender, lanceolate.

Sphondylium majus aliud laciniatis foliis, *Raii Syn.* 205, 1.
Heracleum longifolium, *Jacq. Austr.* 174.
Heracleum angustifolium *β*, *Persoon Syn.* 314.
Jagged cow-parsnep.

XXXV. 300. TORDYLIUM. Dioscorides. *Hartwort.*

Involucrum and *involucella* many-leaved, leaves of the latter longest; *calyx* 5-toothed, persisting, unequal; *petals* radiating, 2-cut, stiff; lacinule reverse ovate, lanceolate; *fruit* roundish, compressed, strigose, crowned; *akenium* flat, margined, thickened, tuberculated, inflated, denticulated; latuscule 3-streaked, 4-vittated; *spermapodium* thread-like, bristlelike, 2-parted; *spermapodophore* blunt, thickened.

1. *Tordylium maximum.* *Great hartwort.*

Stem rough, bristled; bristles deflexed; *leaves* pinnate; leaflets lanceolate, cut, serrated, terminal leaflet double-sized.

Tordylium maximum, *Raii Syn.* 206, 1; *Lin. S. P.* 245.
Seseli Creticum majus, *Ger. em.* 1050, 2.
Tordylium sive Seseli Criticum majus, *Park.* 906.
Heracleum Tordylium, *Sprengel Umbell.* 12.

Ruins and fields, naturalized; annual; June and July.

Stem upright, 4 feet high, branchy; *leaves* rough, central; *umbellules* nearly sessile; *fruit* muricated, margin reddish.

2. *Tordylium officinale.* *Shop hartwort.*

Stem pubescent, hairs deflected, soft; *leaves* pinnate, leaflets ovate, cut, crenate; terminal leaflet largest; *involucella* as long as the flowers.

Tordylium Narbonense minus, *Raii Syn.* 206, 2.
Seseli Creticum minus, *Ger. em.* 1050, 1.
Tordylium, sive Seseli Creticum minus, *Park.* 906.
Tordylium officinale, *Lin. S. P.* 345.
Black hartwort.

Fields; annual; June and July.

Stem branchy, hairs soft; *leaves* pinnate, hairy, rough; root-leaves petioled, leaflets ovate, rather lobed; stem-leaves sessile, leaflets oblong, acute, serrate, cut; *umbells* terminal.

XXXVI. 301. CORIANDRUM. Theophrast. *Coriander.*

Involucrum 0; *involucella* usually 3-leaved, halved; *calyx* 5-toothed, unequal, persisting; *petals* radiating, 3-lobed; lacinule short, obtuse; *stylopodium* short, conical; *fruit*

spherical, crowned; *akenium* hemispherical; latuscule 4-ribbed, 5-valleculated, not vittated; commissure hollowed; vittæ 2, semi-lunate, in the membranous endocarp; *spermapodium* bristlelike, compressed, smaller at each end adnate, half 2-cut; *spermapodophore* adnate to the fruit.

Coriandrum sativum. *Cultivated coriander.*

Coriandrum, *Raii Syn.* 221, 1; *Ger. em.* 1012.
Coriandrum vulgare, *Park.* 918.
Coriandrum sativum, *Lin. S. P.* 367.

Gardens and cultivated; annual; June.

Stem upright, branchy; *leaves* compound; lower leaves pinnate, leaflets wedgeshape, roundish, cut; upper leaves triternate; lobes linear; *umbells* many-rayed. — Leaves strong-scented; seeds slightly aromatic, used to cover the taste of senna, and in spices, as currie powder, and seasoning for black puddings; also covered with sugar as a sweetmeat; formerly steeped in wine or vinegar, and then dried to render them milder.

XXXVII. 302. PEUCEDANUM. Dioscor. *Hogs-fennel.*

Involucrum few-leaved, bristlelike; *involucella* many-leaved, bristlelike; *flowers* of the centre abortive; *calyx* 5-toothed, inflected; *petals* equal, oblong; lacinule acute, inflected; *fruit* ovate, elliptical, lenticularly compressed; *akenium* elliptic, compressed, 5-ribbed; marginal rib slightly winged; *commissural vittæ* 2, curved; *spermapodium* bristlelike, 2-cut.

Peucedanum officinale. *Shop hogs-fennel.*

Leaves 3 or 4-ternate; leaflets threadshape, linear, undivided.

Peucedanum, *Raii Syn.* 206, 1; *Ger. em.* 1054, 1.
Peucedanum vulgare, *Park.* 880.
Peucedanum officinale, *Lin. S. P.* 353.
Sulphur wort. Horestrong. Harestrange. Brimstone wort.

Marshes by the sea; perennial; June and July.

Root fusiform; *stem* branchy; *leaves* stiff, bald; *umbells* large, many-rayed.—Root fœtid, acrid, bitterish, yielding by incision a yellow juice drying into a gum-rosin.

XXXVIII. 303. PASTINACA. Brunsfel. *Parsnep.*

Involucrum and *involucella* 0; *flowers* hermaphrodite, fertile; *calyx* 0; *petals* equal, obtuse, tip involute; *stylopodium* conical, undulated at the edge; *fruit* nearly orbiculate, compressed, flat; *akenium* reverse ovate, striated,

marginal streak slightly winged; *dorsal vittæ* 4, nearly equal; commissural vittæ 2, curved, short, obtuse, distant; *spermapodium* bristlelike, 2-cut.

Pastinaca sativa. *Cultivated parsnep.*

Leaves pinnate, pubescent underneath; leaflets cut, serrate; terminal leaflets 3-lobed.

Pastinaca sylvestris latifolia, *Raii Syn.* 206, 1; *Ger. em.* 1025, 2; *Park* 944.
Pastinaca sativa, *Lin. S. P.* 376.
Pastinaca sylvestris, *Hudson Fl. Angl.* 125.
Selinum Pastinaca, *Crantz Austr.* 161.
Anethum Pastinaca, *Wibel Fl. Wenth.* 146.
Wild parsnep.

Edges of fields, on chalk; biennial; July.

Root fusiform; *stem* 3 feet high, branchy; *umbells* short, many-rayed.—*Seeds* produce sweeter and larger parsneps than the seeds of the garden variety.

β. *edulis.* *Leaves* broad.

Pastinaca latifolia sativa, *Raii Syn.* 206, 2; *Ger. em.* 1025, 1; *Park.* 944.

Leaves pinnate; leaflets eared, either hairy or smooth.—*Roots* nutritive, sweeter than carrots, but strong-scented; are brewed into an agreeable wine, or with hops, beer; *seeds* febrifuge, contain an essential oil.

XXXIX. 304. SILAUS. Pliny. *Sulphur-wort.*

Involucrum 1 or 2-leaved; *involucella* many-leaved; *calyx* 0; *petals* equal, oblong, inflected at the tip; *fruit* ovate, gibbous, crowned; *akenium* oblong, reverse ovate, gibbous, 5-ribbed; ribs blunt, vallecules convex, 2 or 3-streaked; *spermapodium* undivided, bristlelike.

Silaus pratensis. *Meadow sulphur-wort.*

Leaves tripinnate; leaflets lanceolate, linear.

Seseli pratense nostras, *Raii Syn.* 216, 1; *Park.* 905.
Saxifraga Anglicana facie seseli pratensis, *Ger. em.* 1047, 1.
Peucedanum Silaus, *Lin. S. P.* 354.
Ligusticum Silaus, *Stokes Bot. Mat. Med.* 2, 90.
English saxifrage. Meadow saxifrage.

Damp fields and pastures; perennial; August.

Root fusiform; *stem* 2 feet high, branched, streaked; *leaves* bald, decompound; leaflets opposite, not cut or pinnatifid; lobes decurrent, edge microscopically aculeated.

XL. 305. PETROSELINUM. Dioscorides. *Parsley.*

Involucrum 0; *involucella* 0; *calyx* 0; *petals* equal, roundish; lacinule short, blunt, inflected; *stamens* short; *stylopodium* depressed; *style* reflected; *fruit* roundish, twin; *akenium* half round, gibbous, 5-ribbed; ribs acute; vallecules convex, 2 or 3-striated, many vittated, naked; *spermapodium* undivided.—*Umbells* sessile.

Petroselinum vulgare. *Common parsley.*

Leaves bipinnate; leaflets deltoid; stem-leaves linear.

Apium hortense, *Ger. em.* 1013, 1.
Petroselinum vulgare, *Park.* 923.
Apium Petroselinum, *Lin. S. P.* 379.

Cultivated; annual; July.

Leaves used in sauces and seasonings.

β. *crispum.* *Leaflets* curled.

Curled parsley.

Preferred by some, as not being liable to have lesser hemlock mistaken for it.

γ. *latifolium.* *Leaflets* very broad.

XLI. 306. APIUM. Pliny. *Smallage.*

Involucrum 0; *involucella* 0; *calyx* 0; *petals* equal, roundish; lacinule short, blunt, inflected; *stamens* short; *stylopodium* depressed, *style* reflected; *fruit* roundish, twin; *akenium* half-round, gibbous, 5-ribbed; ribs acute; vallecules convex, 2 or 3-streaked, many-vittated, naked; *spermapodium* undivided.—*Umbells* sessile.

Apium graveolens. *Strong-scented smallage.*

Leaves bipinnate; leaflets rhombic, wedgeshape.

Apium palustre et officinarum, *Raii Syn.* 214, 1.
Eleoselinum seu Paludapium, *Ger. em.* 1014, 1.
Apium vulgare sive palustre, *Park.* 926.
Apium graveolens, *Lin. S. P.* 379.
Seseli graveolens, *Scopoli Carn.* 360.
Wild celeri. Marsh parsley. Water parsley.

Rivulets near the sea; biennial; August.

Stem bald; branches spreading; *leaves* yellowish green, shining.—Root and stem fœtid, acrid, poisonous.

β. *dulce.* *Leaves* dark green.

Apium dulce, *Miller's Gard. Dict.*
Apium Celeri, *Gærtner Fr. et Sem.* 1, 22.
Celeri. Sellery.

Cultivated in dry ground; biennial; August.

Root, stem, and petioles, blanched by being kept covered from the sun, sweet, esculent in cold salads or as a potherb, wholesome.

XLII. 307. FŒNICULUM. Pliny. *Fennel.*

Involucrum 0; *involucella* 0; *calyx* 0; *petals* nearly equal, involute, keeled; lacinule blunt, nicked, long; *stigmata* sessile; *fruit* oblong, gibbous; *akenium* ovate, oblong, 5-jugated, jugæ blunt, ribbed; vallecules 4, veiled, convex, 1-vittated; latuscule contracted; *spermapodium* bristlelike, 2-parted.

Fœniculum vulgaris. *Common fennel.*

Leaves decompound; lobes hairlike; stem-leaves deflected.

Fœniculum vulgare, *Raii Syn.* 217, 1; *Ger. em.* 1032, 1; *Park.* 884; *Gærtn. Fr. et Sem.* 1, 105.
Anethum Fœniculum, *Lin. S. P.* 377.
Ligusticum Fœniculum, *Stokes Bot. Mat. Med.* 2, 100.
Fenckell.

Chalk-cliffs; biennial; July and August.

Stem upright, much branched; *leaves* tripinnate, leaflets bristlelike, dark green, hanging down; *umbells* flat, many-rayed.—Herb used as sauce, carminative.

XLIII. 308. SMYRNIUM. Dioscorides. *Alexanders.*

Involucrum 0; *involucella* 0; *calyx* slightly toothed; *petals* equal, lanceolate, apex pointed, inflected; *stylopodium* depressed; *fruit* ovate, roundish, gibbous; *akenium* roundish, semilunate, 5-ribbed; ribs acute, very slightly winged; vallecules wrinkled; commissures very slender; *spermapodium* bristlelike; *perisperm* involute.

Smyrnium vulgare. *Common alexanders.*

Lower leaves triternate; upper leaves ternate, petioled; leaflets deeply serrated.

Smyrnium, *Raii Syn.* 208, 1.
Hipposelinum, *Ger. em.* 1019.
Hipposelinum sive Smyrnium vulgare, *Park.* 930.
Smyrnium Olusatrum, *Lin. S. P.* 379.

Old walls and rocks; biennial; May.

Root fleshy; *stem* branchy; *leaves* shining, pale green, bald; *petioles* dilated, bellied; *umbells* globular, many-rayed; *fruit* large, black.—Root and herb carminative, stomachic.

XLIV. 309. BUPLEURUM. Hippocrates. *Thorow-wax.*

Involucrum 0; *involucella* 5-leaved, leaves ovate, acute, nearly joined together, unequal, spreading, persisting; *calyx* 0; *petals* equal, involute, entire; *fruit* ovate, ending in a patelliform stylopodium; *akenium* ovate, oblong, 5-ribbed; ribs acute; vallecules 2-keeled, not vittated; *spermapodium* hairlike, 2-parted.

Bupleurum rotundifolium. *Round-leaved thorow-wax.*

Bupleurum perfoliatum rotundifolium annuum, *Raii Syn.* 221, 1.
Perfoliata vulgaris, *Ger. em.* 536, 1; *Park.* 580.
Bupleurum rotundifolium, *Lin. S. P.* 340.
Bupleurum perfoliatum, *Lamarck Fl. Fr.* 405.
Thorow-leaf.

Chalky corn-fields; annual; July.

Stem branched alternately; *leaves* ovate, pointed, all perfoliated, glaucous, bald; *umbells* axillary and terminal, peduncled, 6 or 7-rayed.

β. *petiolatum.* *Leaves* oblong and oval; 2 lowermost petioled, the third lanceolate, oblong, barely perfoliated.

XLV. 310. AGOSTANA. Lord Bute. *Hares-ear.*

Involucrum and *involucella* 3 to 5-leaved; leaves equal, lanceolate, ribbed, veined; *calyx* denticulated; *petals* equal, ovate, bent in, nicked; *fruit* ovate, rather compressed, crowned; *akenium* ovate, oblong, 5-angled or ribbed, not vittated; angles or ribs and vallecules covered with warts; commissures unequal, warty, furrowed in the middle; *spermapodium* bristlelike, 2-cut.

1. *Agostana tenuissima.* *Very-slender hares-ear.*

Stem branchy; *leaves* linear, acute; *umbells* simple, alternate, nearly sessile, 3 or 5-flowered; *involucrum* and *involucella* 5-leaved, awlshape.

Bupleurum minimum, *Raii Syn.* 221, 1; *Park.* 587.
Bupleurum tenuissimum, *Lin. S. P.* 343.
Agostana tenuissima, *Lord Bute* 8, 299.
Odontites tenuissima, *Hoffmann Umbell.*

Muddy sea-shores; annual; August and September.

Stem branchy at bottom; *branches* upright, spreading, simple; *leaves* narrow at bottom; *umbells* solitary; *involucella* longer than the flowers.

2. *Agostana divaricata.* *Spreading hares-ear.*

Stem branchy; *branches* divaricating; *umbells* peduncled, lateral, opposite to the leaves; *involucrum* 3-leaved; *involucella* 5-leaved, ovate, acute, 3-ribbed, coloured.

Perfoliata minor angustifolia, bupleuri folio, *Bauh. Pin.* 277.
Bupleurum Odontites, *Lin. S. P.* 342.

Rocks by the sea; annual; July.

Plant stiff; *leaves* lanceolate; *involucrum* 5-ribbed; lateral ribs close together.

XLVI. 311. ERYNGIUM. Dioscorides. *Eringo.*

Flowers sessile, capitate, intermixed with chaffs; *calyx* 5-parted, persisting; *petals* oblong; lacinule bent in, fastened at the base; *fruit* reverse ovate, slightly compressed, truncated, crowned; *akenium* ovate, slightly angular, covered with membranaceous chaffy scales.

a. *Involucrum and chaffs lanceolate.*

1. *Eryngium campestre.* *Field eringo.*

Stem much branched; *root-leaves* bipinnate, leaflets decurrent, ovate, variously bent; stem-leaves embracing the stalk, pinnately lobed.

Eryngium vulgare, *Raii Syn.* 222, 1.
Eryngium Mediterraneum, *Ger. em.* 1162, 2.
Eryngium Mediterraneum seu campestre, *Park.* 986.
Eryngium campestre, *Lin. S. P.* 337.
Levant sea-holly.

Pastures by the sea-side; perennial; July and August.

Leaves pinnatifid, spinous, decurrent; lobes divided, and often pinnatifid.—Root candied, slightly aromatic, eaten as a stimulant and antipestilential.

b. *Involucrum like the leaves; chaffs tricuspidate.*

2. *Eryngium maritimum.* *Sea eringo.*

Root-leaves roundish, plaited, spinous; *heads* peduncled.

Eryngium marinum, *Raii Syn.* 222, 2; *Ger. em.* 1162, 1; *Park.* 986.
Eryngium maritimum, *Lin. S. P.* 337.
Sea holly. Sea holme. Sea hulver.

Sandy sea-shores; perennial; July and August.

Root creeping; *stem* branchy; *leaves* lobed, ribbed, glaucous, bald; root-leaves petioled; *heads* conical; *corolla* blue.—Leaves bitter, astringent.

Fam. XI. 46. SAXIFRAGEÆ. Jussieu.

Calyx adherent, or rarely free, limb 5-lobed; *petals* 4 or 5, on the rim of the calyx, alternating with the lobes, rarely 0; *stamens* inserted with the petals, as many or double the number, opposite and interposed; *styles* 2, persisting; *ovary* 1, girt with a gland; *capsule* 2-beaked, 2-valve, 1 or 2-celled, opening by a terminal pore; valves in the 2-celled capsules bent inwards; *seeds* on the partitions or base of the capsule; perisperm fleshy; corculum axile, straight; radicle below.—*Stem* herbaceous; *leaves* alternate, rarely opposite; *inflorescence* various.

A. *Petals 5, regular, clawed.*

Ovary free; *filaments* roundish, spindle-shape ..... ROBERTSONIA. 312.
Ovary free; *filaments* dilated at bottom, connate; *calyx* bent back; *petals* naked .. HYDATICA. 313.
Ovary free; *filaments* dilated at bottom, connate; *calyx* upright ..... MISCOPETALUM. 314.
Ovary free; *filaments* dilated at bottom, connate; *petals* 2-horned at the base .. KINGSTONIA. 315.

B. *Petals 5, regular, not clawed.*

Ovary adherent ..... SAXIFRAGA. 316.

C. *Petals none.*

Capsule 2-valved; *placentarium* basillary. CHRYSOSPLENIUM. 317.

I. 312. ROBERTSONIA. Haworth. *None-so-pretty.*

Calyx free, 5-parted, lobes membranaceous, becoming reflected; *corolla* 5-petaled, regular; petals clawed; *filaments* round, slender at bottom, thickened at top, as long as the petals; *ovary* free; *capsule* 1-celled, many-seeded, beaked; beaks recurved.—*Root* perennial; *leaves* roundish, wedgeshape or oblong; edge cartilaginous, toothed or crenulate; *scape* solid, leafless, effused, panicled; *flowers* small, white, sprinkled with red or yellow spots.

1. *Robertsonia serrata.* *Sawleafed none-so-pretty.*
Leaves reverse ovate, wedgeshape, stiff, acutely serrate, bald, naked.

Robertsonia serrata, *Haworth App. Succ.* 322.

Ireland; perennial; May.

Leaves narrower, deeper, and more acutely serrated than R. punctata.

2. *Robertsonia polita.* *Polished none-so-pretty.*

Leaves kidneyshape, rounded, finely toothed, naked, polished.

Robertsonia polita, *Haworth App. Succ.* 322.

Mountains; perennial; May.

3. *Robertsonia hirsuta.* *Rough none-so-pretty.*

Leaves heartshape, oval, retuse, crenated; edge cartilaginous.

Saxifraga hirsuta, *Lin. S. P.*

Robertsonia hirsuta, *Haworth App. Succ.*

Mountains of Ireland; perennial; June.

Herb large; *leaves* dilated.

4. *Robertsonia reniformis.* *Kidneyleaved none-so-pretty.*

Leaves kidneyshape, toothed, hairy.

Saxifraga Geum, *Lin. S. P.* 576.

Robertsonia reniformis, *Haworth App. Succ.* 322.

Mountains of Ireland; perennial; June.

Herb small; *flowers* milkwhite, nearly naked at the base with a purple line and yellow stain.

5. *Robertsonia dentata.* *Toothed none-so-pretty.*

Leaves kidneyshape, rounded, crenately toothed.

Robertsonia dentata, *Haworth App. Succ.* 323.

Mountains in Scotland; perennial; May.

Herb less hairy than the preceding; *leaves* less finely toothed, small, numerous; *flowers* white spotted with red and yellow.

6. *Robertsonia umbrosa.* *Shady none-so-pretty.*

Leaves very bald, reverse ovate, rather retuse, crenate, edge cartilaginous; *petioles* the length of the leaf, fringed with reddish hairs.

Geum folio subrotundo majori, pistillo floris rubro, *Dillen in Raii Syn.* 355, 3.

Sedum montanum serratum guttato flore, *Park.* 738.

Cotyledon, sive Sedum montanum latifolium serratum guttato flore, *Park.* 741.

Saxifraga umbrosa, *Lin. S. P.* 574.

London pride. None-so-pretty.

Mountains; perennial; June.

Leaves aggregated, spread, smooth; *scape* red, hairy, panicled; *petals* white, spotted with blood-colour and yellow.

II. 313. HYDATICA. Necker. *Kidney-wort.*

Calyx 5-parted; lobes become bent back; *petals* 5, clawed; *filaments* threadshape, alternate, enlarged at bottom, connate, shorter than the petals; *ovary* free; *capsule* membranaceous, beaked, beaks short, bent back; *seeds* many, rough with elevated tubercular lines placed lengthways.—*Herb* perennial; *stem* branched; *leaves* crowded, radical, wedgeshape, serrated or not cut; *scape* panicled; *petals* white, spotted with yellow.

Hydatica stellaris. *Starlike kidney-wort.*

Leaves oblong, wedgeshape, rather fleshy, toothed or not cut; *petals* equal, oblong, pointed.

Geum palustre minus, foliis oblongis crenatis, *Raii Syn.* 354, 1.
Saxifraga stellaris, *Lin. S. P.* 572.
Hairy kidneywort.

Sides of shady alpine rivulets; perennial; June and July.

Root tufted; *stem* rooting, 8 inches high; *leaves* most hairy on the edge; *panicle* few-flowered; *bracteæ* lanceolate, or 3-cut; *petals* with two yellow dots on each end.

β. *minor.* *Stem* 1 inch high; *scape* 1-flowered; *flowers* large.

III. 314. MISCOPETALUM. Haw. *Bulbous-saxifrage.*

Calyx 5-parted, lobes upright; *petals* 5, equal, crowned; *filaments* filiform, slender above, dilated at bottom, connate; *ovary* free; *capsule* ovate, 1-celled, many-seeded.—*Stem* leafy; *leaves* petioled, roundish, kidneyshape, fleshy, serrated or lobed; *flowers* white, solitary, or panicled.

Miscopetalum? cernuum. *Drooping bulbous-saxifrage.*

Leaves palmately lobed, rather bald; upper leaves uncut; axillæ gemmiparous; *flowers* solitary; *petals* retuse, very slightly nicked.

Saxifraga cernua, *Lin. S. P.* 577.

Moist alpine rocks; perennial; July.

Root scaly; *stem* upright, seldom branched, 1-flowered; *upper leaves* sessile; *flower* white, terminal, drooping.

IV. 315. KINGSTONIA. *Marsh-saxifrage.*

Calyx 5-parted, lobes grow reflected; *petals* 5, equal, reverse ovate, clawed, with 2 hornlike appendages above the base situated on the 2 outer veins; *filaments* thread-shape, slender above, dilated at bottom, connate; *ovary* free; *capsule* ovate, 1-celled, many-seeded.—*Stem* leafy; *leaves* alternate, lanceolate, bald; edge undivided, often fringed; *flowers* panicled, terminal, yellow.

Dr. Kingstone first found this plant on Knotsford-moor, Cheshire, *Dillen in Raii Syn.* 355.

Kingstonia guttata. *Spotted marsh-saxifrage.*

Stem upright; *leaves* lanceolate, blunt, bald.

Geum angustifolium auctumnale, flore luteo guttato, *Dillen in Raii Syn.* 355, 2.
Chamæcistus Frisicus, *Ger. em.* 1284, 8.
Saxifraga Hirculus, *Lin. S. P.* 576.

Turf bogs; perennial; August.

Root fibrous; *stem* round, hairy, branched at bottom, twigs lying down; *panicles* 3 or 4-flowered; *petals* spotted as far as the middle with yellow.

V. 316. SAXIFRAGA. Pliny. *Saxifrage.*

Calyx adherent, 5-cut, lobes upright; *petals* 5, slender at bottom; *filaments* slender at top, dilated at bottom, connate; *ovary* adherent or semi-adherent; *capsule* 1-celled, many-seeded.—*Habit* various, probably containing many natural genera.

a. *Stem naked; leaves radical, fleshy, broad, not cut; flowers panicled.*

1. *Saxifraga nivalis.* *Snow saxifrage.*

Leaves reverse ovate, crenate, nearly sessile; *flowers* crowded.

Saxifraga foliis oblongo-rotundatis dentatis, floribus compactis, *Raii Syn.* 354, 5.
Saxifraga nivalis, *Lin. S. P.* 573.

Alps; perennial; July.

Roots tufted; *leaves* broad; *scape* viscid and hairy above; *bracteæ* lanceolate; *petals* spotted with green; *ovary* adherent.

b. *Stem leafy; leaves opposite, not cut, leathery, fringed; flowers* 1 *or* 2, *terminal, bluish.*

2. *Saxifraga cærulea.* *Blue saxifrage.*

Leaves crowded, ovate, fringed; *flower* solitary, nearly sessile; *petals* ovate, twice as long as the stamens or styles.

Saxifraga alpina ericoides, flore cæruleo, *Raii Syn.* 353, 1.
Saxifraga oppositifolia, *Lin. S. P.* 575.
Saxifraga cærulea, *Lapeyr. Saxifr.* 36, 16.
Purple saxifrage.

Rocks and alpine places; perennial; April.

Stem prostrate, very long, tufted or pendulous; flower-bearing shoots upright; *leaves* sometimes slightly alternate, uppermost leaves remote; *ovary* half-adherent.

c. *Stem leafy; leaves not cut, alternate, leathery, fringed; flowers panicled, yellow dotted with red.*

3. *Saxifraga autumnalis.* *Autumn saxifrage.*

Stem prostrate at bottom; *root-leaves* aggregate; stem-leaves alternate, linear, lanceolate, fringed; *calyx* 5-cut.

Saxifraga alpina angusto folio, flore luteo guttato, *Raii Syn.* 353, 2.
Sedum Alpinum primum Clusii, *Ger. em.* 516, 2.
Saxifraga aizoides, *Lin. S. P.* 576.
Saxifraga autumnalis, *Hudson Fl. Angl.* 180.

Alpine rivulets; perennial; July and August.

Stems aggregated, branched at bottom; *leaves* sessile, blunt; *panicle* simple, few-flowered or branched, many-flowered, leafy; *petals* ligulate; *ovary* depressed; *capsule* half-adherent.

4. *Saxifraga aizoides.* *Sengreen saxifrage.*

Stem-leaves scattered, linear, awlshape, fringed; ciliæ teethlike; *terminal calyx* 4-cut.

Saxifraga aizoides, *Lin. S. P.* 576.

Alpine places; perennial; August.

Herb smaller, slenderer, and more decumbent than S. autumnalis; *leaves* rather upright; *flowers* nearly paniculate; terminal flower 4-petaled; *anthers* 7.

d. *Stem leafy; root-leaves petioled, lobed, herbaceous; flowers panicled, white; ovary half-adherent.*

5. *Saxifraga granulata.* *Granulated saxifrage.*

Root granulated; *stem* nearly racemose; *leaves* round, kidneyshape, slightly lobed.

Saxifraga rotundifolia alba, *Raii Syn.* 354, 6.
Saxifraga alba, *Ger. em.* 841, 1.
Saxifraga alba vulgaris, *Park.* 424.
Saxifraga granulata, *Lin. S. P.* 576.
White saxifrage. White stone-break.

Fields and pastures; perennial; May.

Stem upright, rather viscid; *leaves* fleshy; stem-leaves sessile; *petals* reverse ovate, white, not spotted.

β. *duplicata. Flowers* double.

6. *Saxifraga rivularis.* *Rivulet saxifrage.*

Root fibrous; *stem* usually 2-flowered; *leaves* petioled, palmate, 3 to 5-lobed, bald; uppermost spathulate, undivided.

Saxifraga rivularis, *Lin. S. P.* 577.

Rivulets in fissures of rocks; perennial; June and July.

Stem single, 2 inches high; *flowers* upright, white; *petals* pointed, small.

e. *Stem upright, leafy; leaves palmate, slender at bottom, herbaceous; flowers panicled, white; ovary adherent, urn-shaped; root annual.*

7. *Saxifraga tridactylites.* *Three-fingered saxifrage.*

Stem upright, branched; *leaves* alternate, wedgeshape, 3 or 5-cut.

Saxifraga verna annua humilior, *Raii Syn.* 354, 4.
Paronychia rutaceo folio, *Ger. em.* 624, 2.
Paronychia foliis incisis, *Park.* 556.
Saxifraga tridactylites, *Lin. S. P.* 576.
Saxifraga annua, *Lapeyr. Sax.* 39.
Rue-leaved whitlow-grass.

Dry walls and waste places; annual; May.

Root fibrous; *leaves* downy; *panicle* leafy; *petals* ovate, small.

β. *lanceolata. Stem* branched; *upper stem-leaves* opposite, spearshape.

γ. *simplex. Stem* simple; *leaves* undivided.

f. Saxifragæ veræ. *Stem leafy, perennial; leaves aggregated at the base in roses, many cut; petals sessile.*

8. *Saxifraga lanceolata.* *Spear-leaved saxifrage.*

Leaves bald, fringed; rose-leaves 7-cut, palmate; bud-leaves very short, upright, 3 or 5-cut; stem-leaves spearshape; *petals* rounded, reverse ovate.

Saxifraga lanceolata, *Haworth Suppl. Succ.* 324.

Scotch mountains; perennial; May.
Petals large, much rounded?

9. *Saxifraga pedatifida.* *Foot-cut saxifrage.*
Root-leaves kidneyshape, pedatifid, 7-lobed; *flowers* nearly corymbous; *petals* linear, reverse ovate; *ovary* adherent.

Saxifraga pedatifida, *Engl. Botany*, 32, 2278.

Scotch alps; perennial; May and June.
Plant large, in tufts; *flowers* small, numerous, milk-white.

10. *Saxifraga quinquefida.* *Five-cut saxifrage.*
Bud-leaves 5-cut, lobes lanceolate, marked with a longitudinal line.

Saxifraga quinquefida, *Haworth Miscell. Nat.* 163.

Scotch alps; perennial; May.
Buds nearly upright, covered with white hairs; *rose-leaves* aggregated, 5 to 11-cut; bud-leaves scattered, 5-cut, sometimes 3-cut, fleshy, with long petioles, bald, fringed; *stem* flexuose, usually 5-flowered; *bracteæ* elliptic, lanceolate, 3-ribbed, bent back; lowermost 3-cut; *flowers* large.

11. *Saxifraga hirta.* *Rough saxifrage.*
Bud-leaves and lower stem-leaves 3-cut, fringed; underneath bald.

Saxifraga hirta, *Haworth Misc. Nat.* 164, not of English Botany.

Scotch alps; perennial; May.
Buds straight, villous; *rose-leaves* 5-cut; bud-leaves 3-cut.

12. *Saxifraga laxa.* *Weak saxifrage,*
Leaves hairy, 3 to 5-parted; lobes elliptical, pointed; buds ascending; *petals* reverse ovate, triple-ribbed.

Saxifraga hirta, *Engl. Bot.* 2291.

Scotch alps; perennial; May and June.
Herb weak, viscous, few-flowered; *petioles* broad, long.

13. *Saxifraga palmata.* *Palmated saxifrage.*
Rose-leaves 5 or 7-cut, very hairy; *petals* nearly round.

Saxifraga palmata, *Engl. Botany*, 455.
Saxifraga petræa, *With. Bot. Arr.* 890.

Welsh mountains; perennial; May and June.
Stem upright, panicled; *flowers* 5 or 7; *petals* yellowish white, pointed; ribbed; *ovary* half adherent.

β. *hybrida. Stem* bent, woolly, hairs often recurved; *buds* recumbent; *leaves* narrow.

Saxifraga hybrida, *Haworth Misc. Nat.* 164.

14. *Saxifraga trifida.* *Three-cut saxifrage.*

Buds upright; *rose-leaves* and bud-leaves 3-cut, fringed; *petioles* fringed.

Saxifraga trifida, *Haworth Misc. Nat.* 165.

Mountains; perennial; July.

Rose-leaves very rarely 5-cut.

15. *Saxifraga lævis.* *Smooth saxifrage.*

Buds prostrate; *rose-leaves* 5-cut; bud-leaves 3 to 5-cut, not fringed; *petioles* fringed.

Saxifraga lævis, *Haworth Misc. Nat.* 165.

Mountains; perennial; June.

Leaves pale, slightly shining.

16. *Saxifraga platypetala.* *Broad-bloomed saxifrage.*

Buds procumbent; *leaves* hairy, 3 or 5-cut, awned; *stem* leafy; *petals* reverse ovate, orbicular.

Saxifraga platypetala, *Engl. Bot.* 2276.

Alpine rocks; perennial; June.

Leaves slender; *petals* large, ribbed; ribs branched.

17. *Saxifraga latifida.* *Broad-cut saxifrage.*

Leaves awned, 3 or 5-cut, base long; upper leaves linear, undivided; *peduncles* very long, naked.

Saxifraga latifida, *Haworth.*

Saxifraga elongella, *Smith Trans. Lin. Soc.* 10. not of Don.

Alpine rocks; perennial; May and June.

Stem upright; branches very leafy; *peduncles* flowered; *petals* reverse ovate, ribbed; ribs branched; *ovary* adherent.

18. *Saxifraga spatulata.* *Spatula saxifrage.*

Upper bud-leaves spatular, linear, pointed; lower 2 or 3-pointed; rose-leaves 5-cut.

Saxifraga spatulata, *Haworth Misc. Nat.* 165.

Scotch alps; perennial; May.

Stem bent, scarcely panicled, downy above; *petals* broad, reverse ovate, blunt, white, with a triple greenish line.

19. *Saxifraga hypnoides.* *Hypnum saxifrage.*

Bud-leaves linear, lanceolate; lowest 3-cut; radical-leaves 5-cut.

Saxifragra hypnoides, *Flora Danica*, 348.
Saxifraga hypnoides β, *Willd. S. P.* 2, 659.

Westmoreland mountains; perennial; May.

Stem panicled, bent, leafy, round, downy; *petals* ovate oblong, white, tipped on the outside with rose-colour.

20. *Saxifraga angustifolia.* *Narrow-leaved saxifrage.*

Bud-leaves linear, lanceolate, the lowermost very rarely 3-cut; rose-leaves often 3-cut.

Saxifraga angustifolia, *Haworth Misc. Nat.* 166.

Mountains; perennial; May.

Stem leafy, hardly panicled; *petals* white, reverse ovate, rather imbricated at bottom.

21. *Saxifraga densa.* *Close saxifrage.*

Bud-leaves awlshape, half-cylindrical; rose-leaves 3-cut.

Saxifraga densa, *Haworth Misc. Nat.* 166.

Mountains; perennial; May.

Buds very closely tufted, red, bald; stem headed; *petals* orbicular, ovate, imbricated at bottom, white, reddish on the outside of the tip.

22. *Saxifraga cespitosa.* *Tufted saxifrage.*

Rose-leaves aggregated, fleshy, 3 or 5-cut, ribbed underneath; *stem* rather naked, usually 2-flowered.

Saxifraga Grœnlandica, *Lin. S. P.*?
Saxifraga cespitosa, *Smith Fl. Brit.* 2, 455.

Mountains; perennial; June.

23. *Saxifraga muscoides.* *Moss-like saxifrage.*

Rose-leaves aggregated, 3-cut; *scape* slender, nearly upright, few-flowered; *flowers* citron-yellow, nearly sessile.

Saxifraga cespitosa, *Scopoli Carn.* 494.
Saxifraga muscoides, *Jacq. Misc.* 2, 125.

Mountains; perennial; May.

Flowers racemous; *petals* lanceolate, oblong, blunt, nearly yellow.

24. *Saxifraga elongella.* *Long saxifrage.*

Bud-leaves linear, not divided, fringed, fringe distant; rose-leaves often 3-cut; *stem* downy, rather naked; usually 2-flowered.

Saxifraga cæspitosa, *Hudson Fl. Angl.* 181.
Saxifraga moschata, *Smith Fl. Brit.* 2, 455.
Saxifraga elongella, *Haworth Misc. Nat.* 167.

Mountains; perennial; May.

Stem threadshape, cylindrical, rather stiff, scarcely leafed, usually 2-flowered, downy; *flowers* yellowish.

25. *Saxifraga pygmæa.* *Pigmy saxifrage.*

Bud-leaves linear, lanceolate, blunt, rather fringed; rose-leaves 3-cut; *raceme* very leafy, 2 to 6-flowered, downy.

Saxifraga moschata, *Engl. Bot.* 2214.
Saxifraga pygmæa, *Haworth Misc. Nat.* 168.

Mountains; perennial; May.

Stem 1 inch high; *stem-leaves* frequently doubled at the base of the peduncles; *bracteæ* small, threadshape, about the middle of the peduncle.

VI. 317. CHRYSOSPLENIUM. Tabernæmontanus. *Golden-saxifrage.*

Calyx adherent, 4 or 5-cut; inside coloured; *petals* 0; *stamens* 8 to 10; *capsule* 1-celled, 2-valved; *placentarium* basillary.

1. *Chrysosplenium alternifolium.* *Alternate-leaved golden-saxifrage.*

Leaves alternate.

Saxifraga aurea foliis pediculis oblongis insidentibus, *Raii Syn.* 158, 2.
Chrysosplenium alternifolium, *Lin. S. P.* 566.

Shaded springs in bogs; perennial; May.

Herb succulent, brittle; *stem* leafy at bottom; *corymbus* terminal, 2-forked, leafy; *flowers* gold-yellow, mostly 4-cut; central flower 5-cut, decandrous.

2. *Chrysosplenium oppositifolium.* *Opposite-leaved golden-saxifrage.*

Leaves opposite.

Saxifraga aurea, *Raii Syn.* 158, 1; *Ger. em.* 841; *Park.* 429.
Chrysosplenium oppositifolium, *Lin. S. P.* 560.
Golden saxifrage. Golden stonebreake.

Shaded springs in bogs; perennial; May.

Stem frequently branched; *flowers* almost always 4-cut, octandrous.

Fam. XII. 47. CRASSULACEÆ.

Calyx free, parted; *corolla* on the base of the calyx; petals as many as the lobes of the calyx, sometimes soldered; *stamens* as many as the petals, interposed; or twice as many, interposed and opposite; *ovaries* distinct, as many as the petals, with a nectariferous scale at the base of each; *camares* as many as the ovaries, 1-celled, many-seeded; *placentarium* marginal; *perisperm* thin, fleshy; corculum straight, axile; radicle below.—*Plant* herbaceous; *leaves* opposite or alternate, fleshy or succulent; *flowers* alternate, spiked, corymbose or cymose.

Petals soldered, tubular at bottom ... UMBILICUS. 318.
Petals free, very small; *stamens* 3 or 4 .. TILLÆA. 319.
Petals free; *stam.* 5 or 7; *scales* undivided. SEDUM. 320.
Petals free; *stam.* 12; *scales* nicked. SEMPERVIVUM. 321.

I. 318. UMBILICUS. *Navel-wort.*

Calyx 5-cut; *corolla* tubular; petals 5, soldered at bottom, limb straight, pointed; *stamens* 10; *ovaries* 5, small, ovate.—*Root* tuberous; *leaves* peltate, crenate; *scape* mostly simple; *flowers* spiked.

1. *Umbilicus pendulinus.* *Hanging navel-wort.*
Flowers hanging down; *bracteæ* not cut.

Cotyledon vera radice tuberosa, *Raii Syn.* 271, 1.
Umbilicus Veneris, *Ger. em.* 528.
Umbilicus Veneris vulgaris, *Park.* 740.
Cotyledon Umbilicus Veneris β, *Lin. S. P.* 618.
Cotyledon Umbilicus Veneris, *Hudson Fl. Angl.* 194.
Cotyledon Umbilicus, *Engl. Bot.* 325.
Cotyledon rupestris, *Salisb. Prod.* 307.
Cotyledon umbilicifolia, *Stokes Bot. Mat. Med.* 545.
Umbilicus pendulinus, *De Candolle Fl. Gall.* 3600.
Wall pennywort. Pennywort. Venus navelwort. Our Lady's navel. Hipwort. Kidneywort.

Damp rocks and old walls; perennial; June and July.
Root tuberous; *stem* leafy at bottom; *flowers* yellowish, green at the mouth; *stamens* very short.

β. *punctatum.* *Stem* spotted; *corolla* cylindrical, dotted.

2. *Umbilicus erectus.* *Upright-flowered navel-wort.*
Flowers upright; *bracteæ* toothed.

Cotyledon radice tuberosa longe repens, *Raii Hist.* 1878.
Cotyledon Umbilicus Veneris, *Lin. S. P.* 615.
Cotyledon lutea, *Hudson Fl. Angl.* 194.
Cotyledon Lusitanica, *Lamarck Encyc. Meth.* 2, 14.
Umbilicus erectus, *De Candolle Fl. Gall.* 3601.

Damp rocks and walls; perennial; June.
Root creeping; *stem* 18 inches high; *flowers* yellow; *stamens* exserted.

II. 319. TILLÆA. Micheli. *Red-shanks.*

Calyx 3-parted; *petals* 3 to 5, awlshape, very small; *stamens* 3 to 5; *ovaries* 3; *camares* 2-seeded, contracted in the middle.—*Root* fibrous; *leaves* perfoliate; *flowers* solitary.

Tillæa muscosa. *Mossy red-shanks.*
Stem procumbent; *flowers* sessile.

Tillæa muscosa annua perfoliata, flore albo, *Micheli Gen.* 22.
Tillæa muscosa, *Lin. S. P.* 186.

Barren sandy heaths; annual; May and June.
Stem generally red; *leaves* blunt, gibbous, bald, reddish; *flowers* 3, 4, or rarely 5-cut.

III. 320. SEDUM. Pliny. *Stone-crop.*

Calyx 5, rarely 4, 6, or 7-cut; *petals* 4 to 7; *stamens* 8 to 14; *ovaries* 4 to 7; scales ovate, blunt, not cut; *camares* 4 to 7, many-seeded.

a. Rhodiola. *Root tuberous; leaves flat; flowers yellow, unisexual.*

1. *Sedum dioicum.* *Dioicous stone-crop.*
Leaves wedgeshape, oblong, pointed, serrated towards the end; *flowers* corymbose, capitate.

Anacampseros radice rosam spirante major, *Raii Syn.* 269, 2.
Rhodia radix, *Ger. em.* 532; *Park.* 727.
Rhodiola rosea, *Lin. S. P.* 1465.
Sedum roseum, *Scopoli Carn.* 560.
Sedum dioicum, *Stokes Bot. Mat. Med.* 548.
Rose root. Rose wort.

Fissure of alpine rocks; perennial; May and June.
Root smells like rose-water; *stem* simple; *leaves* sessile; *cyme* sessile, many-flowered.

b. Telephium. *Root tuberous; leaves flat; flowers white, or purple.*

2. *Sedum vulgare.* *Common stone-crop.*
Stem upright; leaves alternate, lanceolate, oblong, serrated; *corymbus* leafy.

Anacampseros vulgo Faba inversa, *Ger. em.* 518, 2.
Telephium seu Crassula major vulgaris, *Park.* 726.
Sedum Telephium γ, *Lin. S. P.* 616.
Sedum Telephium α, *Aiton H. Kew. ed.* 2, 3, 111.
Anacampseros vulgaris, *Haworth Succ.* 112.
Common orpine. Live long. Lib long.

Fields and hedges on chalky soils; perennial; August.

Root white; *stem* 2 feet high, simple; *leaves* ovate, glaucous, smooth; *flowers* whitish.—Leaves boiled in milk diuretic.

3. *Sedum triphyllum.* *Three-leaved stone-crop.*

Stem upright; *leaves* in three, whirled, oblong, serrate; *corymbus* terminal.

Sedum Telephium β, *Lin. S. P.* 616.
Sedum verticillatum, *Don Cat. Cant.* 6, 125.
Anacampseros triphylla, *Haworth Succ.* 112.

c. Sedum. *Leaves round, blunt, loose at bottom; flowers white or bluish.*

4. *Sedum villosum.* *Villous stone-crop.*

Stem upright; *leaves* alternate, oblong, flattish above, downy; *peduncle* 1-flowered, axillary, downy; *petals* ovate, bluntish.

Sedum purpureum pratense, *Raii Syn.* 270, 4.
Sedum minus palustre, *Ger. em.* 516, 1.
Sedum arvense, seu palustre flore rubente, *Park.* 734.
Sedum villosum, *Lin. S. P.* 620.
Small water sengreen.

Moist meadows and pastures; perennial; June and July.

Root fibrous; *stem* branched at bottom; *upper leaves* mostly pubescent; *panicle* viscid; *petals* white, with a purple rib; *camares* rough.

5. *Sedum Anglicum.* *English stone-crop.*

Stem weak, slender; *leaves* mostly alternate, ovate, gibbous, fat; *pedicells* bald; *cyme* 2-cut, smooth.

Sedum minimum non acre flore albo, *Raii Syn.* 270, 6.
Sedum annuum, *Hudson Fl. Angl. ed.* 1, 172.
Sedum Anglicum, *Hudson Fl. Angl.* 196.
Sedum rubens, *Lightfoot Fl. Scot.* 235.

Mountains and sandy sea-shores; annual.

Stem ascending; *leaves* rather glaucous; *cymes* terminal, nearly leafless; *calyx* blunt, smooth; *petals* acute; *camares* smooth.

6. *Sedum dasyphyllum.* *Thick-leaved stone-crop.*

Stem weak, downy at top; *leaves* opposite, ovate, blunt, fat; *flowers* loosely racemous, glutinous, often 6-petaled.

Sedum minus circinato folio, *Dillen in Raii Syn.* 271, 8.
Sedum dasyphyllum, *Lin. S. P.* 618.

Walls and rocks; perennial; June.

Stem decumbent, creeping; flowering branches upright; *leaves* imbricate, glaucous, reddish; *panicle* few-flowered; *calyx* pubescent, viscid.

7. *Sedum album.* *White stone-crop.*

Leaves scattered, oblong, roundish, blunt, spreading; *cymes* much branched, bald.

Sedum minus teretifolium album, *Dillen in Raii Syn.* 271, 7.
Sedum minus officinarum, *Ger. em.* 512, 2.
Vermicularis flore albo, *Park.* 733.
Sedum album, *Lin. S. P.* 619.
White-flowered prickmadam. Wild prickmadam. Great stone-crop. Wormgrass.

Stem branched, ascending; *leaves* horizontally spread, rather glaucous; *calyx* blunt, smooth.

d. *Leaves round, blunt, loose at bottom; flowers yellow.*

8. *Sedum acre.* *Biting stone-crop.*

Leaves alternate, rather ovate, sessile and nearly adnate, fleshy, gibbous, rather upright; *cyme* 3-cut, leafy.

Sedum parvum acre flore luteo, *Raii Syn.* 270, 5.
Vermicularis, sive Illecebra minor acris, *Ger. em.* 517.
Illecebra minor seu Sedum tertium Dioscoridis, *Park.* 735.
Sedum acre, *Lin. S. P.* 619.
Wall pepper. Stone hot. Pricket. Mouse tail. Country pepper. Jack of the buttery.

Rocks and dry sandy places; perennial; June.

Stem tufted, ascending; *leaves* wedgeshape, bunched out at bottom, free; *cyme* solitary, few-flowered; *calyx* blunt, smooth, *petals* acute; *capsule* smooth.—Juice very acrid, applied externally it blisters, and is emetic when drank: used as an alterative in scurvy and intermittent fevers.

9. *Sedum sexangulare.* *Six-angled stone-crop.*

Leaves roundish, spreading, whirled in threes, in the shoots scaly in six rows; *cyme* 3-cut, leafy.

Sedum acre β, *Hudson Fl. Angl.* 196.
Sedum sexangulare, *Lin. S. P.* 620.

Dry sandy places and wall; perennial; June, July.
Juice insipid.

e. Aizoon. *Leaves awlshape, acute, loose at bottom; flowers yellow, cymose.*

10. *Sedum reflexum.* *Reflected stone-crop.*

Leaves awlshape, spread, glaucous, crowded; lower reflected; *flowers* rather cymose.

Sedum minus luteum ramulis reflexis, *Raii Syn.*
Aizoon scorpioides, *Ger. em.* 513, 6.
Vermicularis scorpioides, *Park.* 733.
Sedum reflexum, *Lin. S. P.* 618.
Scorpion sengreen.

Walls and rocks; perennial; July.

Stem branched at bottom, ascending, 1 foot high; *leaves* lengthened out at bottom; lower leaves deciduous; *calyx* bald, deeply divided.—Biting, used in sallads along with lettuces.

11. *Sedum glaucum.* *Sea-green stone-crop.*

Stem much branched; *leaves* awlshape, spread, very glaucous, lengthened at bottom, twigs threadshape; *flowers* cymose; *calyx-lobes* lanceolate.

Sedum minus hematoides, *Raii Syn.* 669, 1; *Ger. em.* 512, 1.
Vermicularis et Crassula minor vulgaris, seu Illecebra major, *Park.* 733.
Sedum reflexum β, *Smith Fl. Brit.*
Sedum glaucum, *Haworth Succ.* 116.
Prickmadam. Dwarf houseleek. Small sengreen.

Sandy places; perennial; July and August.

Branches and *twigs* long, creeping, 4 inches high.

β. *minus.* *Branches* and *twigs* compact, erect, 2 inches high.

12. *Sedum rupestre.* *Rock stone-crop.*

Leaves awlshape, upright, spread, crowded, glaucous; *flowers* nearly cymose; petals twice as long as the calyx.

Sedum minus a rupe S. Vincentii, *Raii Syn.* 270, 3.
Sedum rupestre, *Lin. S. P.* 618.
Bristol sengreen.

Rocks; perennial; July.

Stem 9 inches high; *leaves* 5-rowed; *calyx-lobes* rather blunt, glaucous.—Acrid, cultivated on the continent for sallad, being eaten with lettuce.

13. *Sedum Forsterianum.* *Forster's stone-crop.*

Leaves awlshape, spreading, many-rowed, crowded, green; *flowers* cymose; *calyx-lobes* short, blunt; *petals* elliptical.

Sedum Forsterianum, *Engl. Bot.* 1802.
Rocks; perennial; July.
Leaves not glaucous.

IV. 321. SEMPERVIVUM. Pliny. *Houseleek.*

Calyx 6 to 12-cut; *petals* 6 to 12; *stamens* 12 to 24; *ovaries* 9 to 12, scales ovate, broad, nicked or torn; *camares* many-seeded.—*Herb* perennial, stemless; *scape* corymbose; *radical leaves* many-rowed, expanded, imbricate, usually fringed.

Sempervivum tectorum. *Roof houseleek.*
Leaves fringed; *buds* spread open; *flowers* 6-cut; *scales* wedgeshape, carunculated.
Sempervivum majus, *Raii Syn.* 269, 1; *Ger. em.* 51.
Sedum majus vulgare, *Park.* 733.
Sedum tectorum, *Lin. S. P.* 664.
Common houseleek. Great houseleek. Aygreen. Jupiter's eye. Bullock's eye. Jupiter's beard. Great sengreen.
Roofs and walls; perennial;
Stem 1 foot high, downy, corymbose; *petals* lanceolate, connate at bottom, longer than the stamens. — Leaves bruised, either by themselves or with cream, much used as a cooling application to burns; juice mixed with honey used externally against aphthæ.

Fam. XIII. 48. PORTULACEÆ. Jussieu.

Calyx cut, persistent; *corolla* 5-petaled; petals soldered or free, inserted on the calyx; *stamens* 3 to 5, inserted on the corolla; *ovary* free or adherent, 1-celled; *styles* 1 to 3; *capsule* 1-celled, 2 or 3-valved; *seed* upright; perisperm farinaceous, central; corculum incurved or annular, peripherical.—*Herb* fleshy; *leaves* opposite or alternate; *flowers* axillary and terminal.

322. MONTIA. Micheli. *Blinks.*

Calyx 2 or 3-valved; *petals* 5, soldered, 2 alternate smaller; *stamens* 3 to 5; *styles* 3; *capsule* 3-valved, 3-seeded. —*Leaves* opposite; *flowers* solitary, axillary, and terminal.

Montia fontana. *Spring blinks.*
Leaves opposite, not divided; *flowers* on peduncles.

Alsine parva palustris tricoccos portulacæ aquaticæ similis, *Raii Syn.* 352, 1.
Cameraria arvensis et minor, *Dillen Cat. Gies.* 46.
Montia aquatica minor, *Micheli Gen. Pl.* 18.
Montia fontana, *Lin. S. P.* 129.
Small water chickweed. Water purslane.

Watery lanes and damp fields; annual; April and May. *Stem* much branched, rooting; *leaves* spatulate; *flowers* white, very small; *fruit* upright.

β. major. Stem 4 inches high, upright.
Montia aquatica major, *Micheli Gen. Pl.* 18.

Fam. XIV. 49. PARONYCHIDEÆ. *Paronychieæ.* St. Hilaire and Jussieu.

Calyx 1-leaf, 5-cut or parted; *petals* inserted on the calyx, alternating with the lobes, often like scales or barren filaments, sometimes 0; *stamens* definite, 5, rarely more, or fewer inserted with the corolla; *filaments* distinct; *anthers* roundish; *ovary* free; *style* 1 and *stigma* simple, or many, with as many stigmata; *fruit* capsular, 1-seeded, valveless, opening at the top; or 1-celled, many-seeded, many-valved at the tip; *seeds* in the 1-seeded fruit often inserted on the side towards the top by an umbilical cord from the bottom of the capsule, in the many-seeded attached to a slightly elevated central receptacle; embryo peripherical, mostly incurved; perisperm farinaceous, central; radicle ascending.

Calyx tubular, neck contracted; *stam.* 8, 10;
petals 0; *utricles* 1-seeded ..... SCLERANTHUS. 323.
Cal. 5-parted, lobes appendiculate; *stam.* 2.;
petals 5, filiform; *utricle* 1-seeded .... ILLECEBRUM. 325.
Cal. 5-parted; *stam.* 5;
pet. 5; equal to the calyx; *utricle* 1-seeded CORRIGIOLA. 326.
Cal. 5-parted, inside coloured; *stam.* 5;
pet. 5, threadshape; *utricle* 1-seeded ... HERNIARIA. 327.
Cal. pitchershape at bottom; *stam.* 3;
pet. 5, scalelike, nicked; *caps.* 3-valved,
many-seeded ..... POLYCARPON. 328.
Cal. pitchershape at bottom; *stam.* 5;
pet. 5, equal to the calyx; *cap.* 6-valved .. LARBREA. 329.
Cal. pitchershape at bottom; *stam.* 10;
pet. 5, equal to the calyx; *cap.* 3-valved ADENARIUM. 324.

A. SCLERANTHIDEÆ. *Flowers* naked; *calyx-lobes* simple; *leaves* sessile, linear, connate at the bottom; *stipules* 0.

I. 323. SCLERANTHUS. Linnæus. *Knawel.*

Calyx tubular, constricted in the neck, limb 5-cut; *petals* 0; *stamens* 10, very small; *anthers* roundish; *styles* and *stigmata* 2; *capsule* very thin, 1-seeded, valveless, sunk in the contracted calyx.—*Stem* herbaceous, small; *flowers* axillary and rather corymbose, terminal.

1. *Scleranthus perennis.* *Perennial knawel.*

Stem procumbent; *calyx-teeth* when in fruit incurved, blunt.

Knawel incanum, flore majore perenne, *Raii Syn.* 160, 2.
Saxifraga Anglicana alsinefolia, *Ger. em.* 567, 5.

Chalky fields; perennial; October and November.

Herb glaucous, rather shining, afterwards reddish; *leaves* often downy.—The Polish cochineal insect is found in summer on its roots.

2. *Scleranthus annuus.* *Annual knawel.*

Stem spreading; *calyx-teeth* when in fruit spreading, pointed.

Knawel, *Raii Syn.* 159, 1.
Polygonum selinoides sive Knawel, *Ger. em.* 566, 4.
Polygonum Germanicum vel Knawel Germanorum, *Park.* 747.
Scleranthus annuus, *Lin. S. P.* 580.
Parsley piert. German Knotgrass.

Sandy corn-fields; annual; July.

Root fibrous; *stems* branchy above; *calyx* 10-ribbed; lobes acute, very spreading.—Steam of the decoction used to cure the toothach.

II. 324. ADENARIUM. Rafinesque. *Sandwort.*

Calyx 5-cut, pitchershape at bottom; *petals* 5, reverse ovate, not divided; *stamens* 10; *filaments* with an ovate gland on each side at the base; *ovary* 1-celled; *ovules* many; *placentarium* central, threadlike; *stigmata* 3; *capsule* three-valved, many-seeded.—*Herb* fleshy, bald; *leaves* opposite, sessile; *flowers* from the forks of the stem, sessile, solitary.

Adenaria marina. *Sea sandwort.*

Leaves ovate, pointed, fleshy, 4-rowed; *calyx-lobes* blunt, ribless.

Alsine marina foliis portulaceæ, *Raii Syn.* 351, 12.
Anthyllis lentifolia, sive Alsine cruciata marina, *Ger. em.* 622, 1.
Anthyllis maritima lentifolia, *Park.* 262.
Arenaria peploides, *Lin. S. P.* 605.
Sea pimpernel.

Sandy sea-shores; perennial; June and July.

Root creeping, very long; *stem* prostrate; *leaves* recurved, keeled, ribless; *flowers* small.

B. PARONYCHIDEÆ VERÆ. *Bracteæ* scarious; *calyx-lobes* with a membranous edge, often hooded at the tip; *leaves* stipuled.

III. 325. ILLECEBRUM. Dioscor. *Creeping-milkwort.*

Calyx 5-parted; lobes thickened at the tip; *petals* 5, threadshape, (barren stamens?) inserted on the bottom of the calyx, alternate with the lobes; *stamens* 2, fertile, perigynous, opposite to the lobes of the calyx; *style* very short; *stigmata* beaded; *capsule* enclosed in the connivent calyx, first streaked, then opening at the streaks, 1-seeded; *seed* inserted on the side; corculum scarcely bent, peripherical. —*Stem* herbaceous, small, prostrate; *stipulæ* scarious; *leaves* opposite; *flowers* glomerate, axillary, whitish.

Illecebrum verticillatum. *Whirled creeping-milkwort.*

Stem prostrate, threadshape, bald; *leaves* roundish; *flowers* whirled, 5-sided, awned.

Corrigiola, *Raii Syn.* 160, 1.
Polygala repens, *Ger. em.* 563, 1.
Illecebrum verticillatum, *Lin. S. P.* 298.
Paronychia verticillata, *De Candolle Fl. Gall.* 2286.

Damp bogs and pastures; perennial; July.

Root fibrous; *leaves* not divided, bald, fleshy; *stipules* torn.

IV. 326. CORRIGIOLA. Erick Cordus. *Strapwort.*

Calyx 5-parted, persisting; *petals* 5, as long as the calyx; *stamens* 5; *style* short; *stigmata* 3; *capsule* 1-seeded, not opening, 3-sided, covered with the calyx; *seed* inserted at the side; corculum peripherical.—*Herb* small; *leaves* alternate, stipuled; *flowers* coloured, small.

Corrigiola littoralis. *Shore strapwort.*

Flowers peduncled.

Corrigiola littoralis, *Lin. S. P.* 380.

Sea-shore; annual; July, August.

Root slender; *stems* many, mostly simple; *leaves* linear, lanceolate, fleshy, glaucous; *thyrse* lateral and terminal, bracteated; *flowers* white.

V. 327. HERNIARIA. Gesner. *Rupturewort.*

Calyx 5-parted, coloured on the inside; *petals* 5, thread-shape; *stamens* 5, alternating; *styles* and *stigmata* 2; *capsule* 1-seeded, not opening, closed in the calyx.—*Herb* small, prostrate; *stem* branchy; *flowers* glomerate, axillary.

1. *Herniaria glabra.* *Bald rupturewort.*

Stem much branched, prostrate, creeping, bald; *glomerules* many-flowered, axillary, bald.

Herniaria, *Raii Syn.* 160, 1; *Ger. em.* 569, 1.
Millegrana major seu Herniaria major, *Park.* 446.
Herniaria glabra, *Lin. S. P.* 317.

Sandy heaths; perennial; July and August.

Root fusiform; *branches* alternate; *leaves* ovate; lower leaves opposite; upper alternate; *flowers* sessile, yellowish green.—*Herb* diuretic, astringent, tastes rather saltish; juice removes specks on the eyes.

2. *Herniaria hirsuta.* *Hairy strapwort.*

Stem rather hard, very much branched, prostrate, creeping, hirsute; *glomerules* few-flowered, axillary, hirsute.

Herniaria hirsuta, *Dillen in Raii Syn.* 161, 2; *Lin. S. P.* 317.

Sandy fields; perennial; July and August.

Stem and lower surface of the *leaves* hirsute; hairs spreading; *calyx* densely bristled.

VI. 328. POLYCARPON. Dalechamp. *All-seed.*

Calyx pitchershape at the bottom, 5-cut; *petals* 5, very short, scalelike, nicked, persisting; *stamens* 3; *ovary* substipitate; *styles* and *stigmata* 3; *capsule* 1-celled, 3-valved, many-seeded.—*Stem* herbaceous; *leaves* opposite or whirled; *flowers* forked, corymbose, terminal.

Polycarpon tetraphyllon. *Four-leaved all-seed.*

Stem much branched, prostrate; *leaves* 4 in a whirl.

Anthyllis marina incana alsinefolia, *Ger. em.* 622, 2.
Polycarpon tetraphyllum, *Lin. S. P.* 131.

Sands and old walls near the sea; annual; July, August.

Stem very much branched, diffuse; *leaves* rather fleshy, upper leaves opposite; *flowers* numerous.

C. *Bracteæ* scarious; *calyx-lobes* with a membranaceous edge; *leaves* not stipuled.

VII. 329. LARBREA. St. Hilaire. *Larbrea.*

Calyx 5-cut, pitchershape at bottom; *petals* 5, perigynous, 2-cut; *stamens* 10, perigynous; *ovary* 1-celled; *ovules* many; *placentarium* central, threadshape; *stigmata* 3, 4, or 5; *capsule* 6-valved at the tip.—*Plant* herbaceous, decumbent; *stem* 4-angular; *leaves* opposite; *peduncles* axillary and terminal, 2 or 3-flowered; *bracteæ* 2 to each flower.

Larbrea aquatica. *Water larbrea.*

Stem decumbent; *leaves* elliptical, lanceolate, callous at the tip; *peduncles* mostly in pairs, 1 or many-flowered; *petals* shorter than the calyx.

Alsine longifolia uliginosis proveniens locis, *Raii Syn.* 347, 7.
Alsine fontana, *Ger. em.* 613, 8.
Stellaria aquatica, *Pollich* 1, 429.
Stellaria Alsine, *Hoffm. Fl. Germ.*
Stellaria uliginosa, *Villars Delph.*
Stellaria graminea β, *Hudson Fl. Angl.* 190.
Stellaria hyperciifolia, *Vigers Holsat.* 34.
Stellaria Dilleniania, *Leers*, 107.
Stellaria fontana, *Jacquin Coll.* 6, 327.
Larbrea aquatica, *St. Hilaire, Mem. Mus.* 3.
Fountain Chickweed. Bog stitchwort.

Rivulets and inundations; annual; June.

Stem weak; *leaves* many-veined, glaucous.

Fam. XV. 50. GROSSULARIÆ. Jussieu.

Calyx adherent, 5-cut; *petals* 5; *stamens* 5, inserted on the calyx; *style* 2-cut; *stigmata* 2; *berry* globose, 1-celled; placentaria 2, parietal, opposite; *seeds* many; corculum straight, very small, at the base of the fleshy perisperm.—*Plant* shrubby; *leaves* alternate, palmately ribbed, 5-lobed.

330. RIBES. Fuchs. *Currant.*

Calyx 5-cut; *petals* 5; *stamens* 5; *berry* globular, one-celled.

a. Ribes. *Stem not armed; flowers racemose; fruit small.*

1. *Ribes rubrum.* *Red currant.*

Stem upright, unarmed; *leaves* bluntly 5-lobed; *racemes* pendulous, bald; *flowers* flat; *petals* reverse-heartshape.

Ribes vulgaris fructu rubro, *Raii Syn.* 456, 1; *Ger. em.* 1593, 1.
Ribes fructu rubro, *Park.* 1561.
Ribes rubrum, *Lin. S. P.* 290.
Common currant. Garnet berries.

Woods and sides of rivers, also cultivated; shrubby; May.

Branches bald; *leaves* slightly downy; *racemes* simple; *bracteæ* ovate, very short; *berry* red, when cultivated sometimes white, acid.—*Berries* an agreeable desert; *juice* of the berries a pleasant acid, with sugar make a fine wine.

β. *dulce.* *Fruit* sweet.

Ribes vulgaris fructu dulci, *Raii Syn.* 456, 1*.
Sweet currants.

γ. *parvum.* *Fruit* small.

Ribes fructu parvo, *Dillen in Raii Syn.* 456, 3.

2. *Ribes alpinum.* *Alpine currant.*

Stem upright, unarmed; *leaves* shining beneath; *racemes* upright; *bracteæ* longer than the flowers.

Ribes alpinus dulcis, *Raii Syn.* 456, 2.
Ribes alpinum, *Lin. S. P.* 291.
Sweet mountain currants.

Woods and hedges; shrubby; April and May.

Leaves 3-lobed; *racemes* upright; *flowers* yellowish green; *bracteæ* lanceolate; *berry* elliptical, mucilaginous.

β. *dioicum.* *Plants* dioicous.

3. *Ribes petræum.* *Rock currant.*

Stem upright, unarmed; *leaves* acutely lobed, cut, toothed; *racemes* rather hairy, upright; *flowers* flattish; petals blunt; *bracteæ* shorter than the flowers.

Ribes petræum, *Wolff. in Jac. Misc.* 2, 36.

Mountains; shrubby; May.

Leaves 5-lobed, nappy beneath; *bracteæ* ovate; *pedicells* short; *racemes* when in fruit pendulous; *berry* globular.

β. *spicatum.* *Flowers* rather spiked; *spike* when in fruit upright.

Ribes spicatum, *Robson Lin. Trans.* 3, 240.

4. *Ribes nigrum.* *Black currant.*

Stem upright, unarmed; *leaves* with glandular dots beneath; *racemes* weak, hairy, hanging down, simple at bottom; *flowers* bellshape; *bracteæ* shorter than the pedicell.

Ribes nigrum vulgo dictum, folio olente, *Raii Syn.* 456, 4.
Ribes fructu nigro, *Ger. em.* 1593, 3; *Park.* 1562.
Quinsey berries.

Woods and dunghills; shrubby; May.

Berry black; *leaves* odorous, unpleasant.—Roots in infusion useful in eruptive fevers, and the dysentery of cattle; leaves when young tinge malt spirits to resemble brandy; berries have to most a disagreeable flavour, the juice of them made by boiling with a little sugar into a rob, or soft extract, much used in inflammatory sore throat, or the quinsey.

β. *polyandrum*. *Stamens* more than 5, some or all of the petals being changed into stamens.

b. Grossulariæ. *Stem prickly; peduncles few-flowered.*

5. *Ribes spinosum*. *Thorny currant.*

Branches prickly; *leaves* roundly lobed; *petioles* hairy; *peduncles* 1 or 2-flowered.

Uva crispa, *Ger. em.* 1324, 1.
Uva crispa, sive Grossularia sylvestris, *Park.* 1560.
Ribes Grossularia, *Lin. S. P.* 291.
Gooseberry. Fea berry, Cheshire. *Berries*, Scotland.

Woods and hedges, also cultivated; shrubby; April.

Stem branchy; *spines* 1 to 3 together, under the petioles; *leaves* downy; *bracteæ* 2 or 3 on each peduncle, fringed; *berry* hanging, varying in colour, hairy; hairs capitated.—Berry a wholesome fruit, either raw, or dressed; seeds have been used for coffee; juice of the fruit with sugar make a sparkling wine like champagne, or a good vinegar.

β. *glabrum*. *Berry* bald; *bracteæ* connate, tubular.

Ribes uva crispa, *Lin. S. P.* 292.
Smooth gooseberries.

Fam. XVI. 51. CUCURBITACEÆ.

Flowers mostly unisexual; *calyx* adherent to the ovary, contracted above, dilated into a 5-cut limb; *corolla* bell-shape, on the top of the ovary, 5-lobed, withering, persistent. Male. *Stamens* 3 to 5, on the contraction of the calyx; *filaments* often jointed; *anthers* 1-celled, on the tip of the filament, flexuous, often in 2 pairs and the 5th solitary; *ovary* abortive. Fem. *Stamens* abortive; *ovary* adherent; *styles* and *stigmata* many; *berry* or *pepo* 1 or many-celled, many-seeded, bark woody; *seeds* horizontal, on the

inner angles of the dissepiments; perisperm 0; corculum straight; cotyledons large, flat.—*Herb* twining, mostly rough; *leaves* petioled, alternate, nearly orbicular; *tendrills* axillary; *peduncles* axillary, jointed in the middle.

Fruit a berry ..... BRYONIA. 331.
Fruit a pepo; *seeds* sharp-edged ..... CUCUMIS. 332.
Fruit a pepo; *seeds* swelling at the edge. CUCURBITA. 333.

I. 331. BRYONIA. Dioscorides. *Wild-vine.*

Plant monoicous or dioicous; *corolla* obtusely 5-cut.—MALE. *Stamens* 3, 2 of which are joined at the base.—FEM. *Styles* 3-cut; *berry* globose.

Bryonia ruderalis. *Ruin wild-vine.*

Leaves heartshape, palmate, 5-lobed, callous, rough; *flowers* racemose, dioicous, fruit red.

Bryonia alba, *Raii Syn.* 261, 1; *Ger. em.* 869; *Lin. S. P.* 1438.
Bryonia alba vulgaris, *Park.* 178.
Bryonia dioica, *Jacquin Austr.* 199.
Bryonia ruderalis, *Salisb. Prod.* 158.
White bryony. Bryony. Tetter berry.

Woods and hedges; perennial; May to September.

Root extremely large; *stem* slender, climbing; *tendrils* very long; *leaves* angular; *peduncles* axillary, few-flowered; *corolla* whitish.—Root acrid, purgative, in doses of one dram, or an infusion of half an ounce.

II. 332. CUCUMIS. Pliny. *Cucumber.*

Plant monoicous; *calyx lobes* awlshape; *corolla* bellshape. —MALE. *Filaments* 3, 2 joined at the base; *anthers* soldered. —FEM. *Filaments* 3, without anthers; *style* 1; *stigmata* 3, 2-parted; *pepo* large, 3-locular, cells parted; *seeds* ovate, compressed; edge acute.

1. *Cucumis sativus.* *Cultivated cucumber.*

Leaves angular, angles acute, straight; *fruit* oblong, rough.

Cucumis vulgaris, *Ger. em.* 910, 1.
Cucumis sativus, *Park.* 772; *Lin. S. P.* 1437.

Cultivated; annual; February to July.

Fruit has many varieties in the gardens, cooling, but very slightly nutritive, the small sort used as a pickle; juice of the fruit with salt and Cayenne pepper used as a sauce.

2. *Cucumis moschatus.* *Musky cucumber.*

Leaves with rounded angles; *fruit* rather warty; skin reticulated.

Melo, *Ger. em.* 917, 1 to 3; *Park. Par.* 527.
Cucumis Melo, *Lin. S. P.* 1436.
Melon.

Cultivated; annual; April to July.

Fruit has many varieties in the gardens; it has a peculiar smell and flavour liked by some and as strongly disliked by others; eaten with wine and sugar, or with salt and pepper, as one of the highest luxuries, especially when fresh gathered, by those who relish it.

III. 333. CUCURBITA. Pliny. *Gourd.*

Plant monoicous; *calyx-lobes* awlshape; *corolla* bellshape.—MALE. *Filaments* 3, 2 soldered together at bottom; *anthers* soldered.—FEM. *Filaments* 3, without anthers, soldered beneath into a rather thick ring; *style* short; *stigmata* 3, thickened; *pepo* large, 3-locular, cells parted; *seeds* ovate, compressed; edge swelled; tip sometimes nicked.

Cucurbita esculenta. *Eatable gourd.*

Flowers bellshape, narrow at bottom; limb upright.

Pepo maximus rotundus, *Ger. em.* 919, 2.
Pepo, *Park. Par.* 527.
Cucurbita Pepo, *Lin. S. P.* 1435.
Pompions. Pumpkins.

Cultivated; annual; August.

Fruit very large, weighing sometimes 20 lb.; flesh of the fruit boiled in milk, or baked in a pie, used as food.

Fam. XVII. 52. SALICARIÆ. Jussieu.

Calyx free, tubular, persisting; *petals* 4 to 6, on the top of the calyx, rarely 0; *stamens* as many, or twice as many as the lobes; *ovary* simple; *style* 1; *capsule* enclosed in the calyx, 2-celled; placentarium columnar, central; *seeds* many, smooth; perisperm very thin; corculum straight, central; radicle below.—*Plant* herbaceous; *leaves* often opposite.

Calyx 6-toothed; *pet.* 6; *caps.* 2-valved LYTHRUM. 334.
Calyx 12-toothed; *pet.* 6 or 0;
caps. valveless ..... PORTULA. 335.

I. 334. LYTHRUM. Dioscorides. *Willow-herb.*

Calyx cylindrical, striated, 6 or 12-toothed; *petals* 6, rarely 4 or 5; *stamens* 6 or 12; *capsule* oblong, 2-celled, 2-valved; valves sometimes 2-cut at the tip.

a. Salicariæ. *Leaves opposite; stamens* 12, *alternately smaller.*

1. *Lythrum spicatum.* *Spiked willow-herb.*

Leaves opposite, heartshape, lanceolate, downy beneath; *flowers* spiked.

Salicaria vulgaris purpurea foliis oblongis, *Raii Syn.* 367, 1.
Lysimachia purpurea spicata, *Ger. em.* 476, 5; *Park* 546.
Lythrum Salicaria, *Lin. S. P.* 610.
Loosestrife. Purple loosestrife.

Bogs and river-sides; perennial; July and August.

Stem 2 feet high, stiff, angular; *leaves* opposite, or in whirls of 3 or 4, bald above; *flowers* spiked in whirls; *corolla* purple.—Used in dysentery, and in obstinate diarrhœas.

b. *Leaves alternate; stamens* 6.

2. *Lythrum hyssopifolium.* *Hyssop willow-herb.*

Leaves alternate, linear; *flowers* axillary, solitary, 6-petaled.

Salicaria hyssopi folio latiore et angustiore, *Raii Syn.* 367, 2.
Gratiola angustifolia, *Ger. em.* 581.
Gratiola angustifolia seu minor, *Park.* 220.
Lythrum Hyssopifolia, *Lin. S. P.* 642.
Lythrum hyssopifolium, *Sibthorp Fl. Ox.* 149.
Grass poly. Small hedge hyssop.

Watery places; annual; August.

Root simple; *stem* branchy at bottom; *leaves* bald; lower leaves sometimes opposite; *flowers* rarely 5-cut, pentandrous.

II. 335. PORTULA. Dillenius. *Water-purslane.*

Calyx bellshape, 12-toothed, teeth alternately shorter; *petals* 6, sometimes 0; *stamens* 6; *capsule* globular, 2-celled, not opening, many-seeded.

Portula palustris. *Marsh water-purslane.*

Leaves opposite, petioled, roundish, ovate; *flowers* axillary, solitary, mostly without petals.

Portula, *Raii Syn.* 368, 1.
Alsine rotundifolia seu Portulaca aquatica, *Ger. em.* 614, 11.
Alsine aquatica minor folio oblongo, seu Portulaca aquatica, *Park.* 1260.
Peplis Portula, *Lin. S. P.* 474.

Bogs and damp heaths; annual; July and August.
Stem prostrate, simple; *leaves* opposite, blunt, bald; *flowers* sessile.

Fam. XVIII. 53. TAMARICINÆ. *Tamariscineæ*, Desvaux.

Calyx free, divided at the tip, persistent; *petals* 5, on the calyx, alternating with the calyx-lobes; *stamens* 5 to 10, free or monadelphious; *ovary* free, 1-celled, 3-valved; *placentarium* parietal; *ovules* many, erect or ascending; *seeds* many, comose; perisperm 0; corculum straight, upright; radicle below.

336. TAMARIX. Pliny. *Tamarisk.*

Calyx 5-parted; *petals* 5; *stamens* 5; *filaments* thread-shape, distinct; *style* short, 3-lobed; *stigmata* 3, oblique, 2-furrowed; *ovules* upright. — *Leaves* imbricate, rather fleshy; *flowers* spiked, lateral, bracteated; *bracteæ* lanceolate.

Tamarix Gallica. *French tamarisk.*
Leaves lanceolate, embracing the stem, imbricate.
Tamariscus Narbonensis, *Ger. em.* 1378, 1.
Tamariscus folio tenuiore, *Park.* 1479; description.
Myrica seu Tamariscus, *Park.* 1472, 1; figure.
Rocks and pastures near the sea; shrubby; July.
Twigs drooping, red, shining; *leaves* smooth; *flowers* flesh-coloured.

Fam. XIX. 54. CERATOPHYLLÆ.

Flowers unisexual; *calyx* many-parted, free; *corolla* 0. —Male. *Stamens* 14 to 20; *anthers* 3-cuspidate.—Fem. *Ovary* free, compressed, 1-celled; *stigma* sessile, oblique; *nut* 1-celled, 1-seeded, leatherlike; *seed* pendulous; perisperm 0; corculum straight; cotyledons 4, 2 larger, opposite; radicle above; plumula conspicuous, very compound. — *Plant* herbaceous, aquatic; *leaves* in whirls, lobed; *flowers* axillary, solitary.

337. CERATOPHYLLUM. Linnæus. *Hornwort.*
No other genus in this family.

1. *Ceratophyllum cornutum.* *Horned hornwort.*
Leaves two-forked, two-paired; *fruits* 3-spined.

Hydroceratophyllon folio aspero, quatuor cornibus armato, *Raii Syn.* 135, 1.
Ceratophyllum demersum, *Lin. S. P.* 1409.
Ceratophyllum cornutum, *Richard Mem. Mus.*

Ditches and ponds; perennial; August and September.

Herb floating under the surface; *stem* branchy; *leaves* in whirls of 8, back-toothed, spinulose.

2. *Ceratophyllum verrucosum.* *Warty hornwort.*

Leaves forked; three-paired; *fruit* unarmed, warty.

Hydroceratophyllon folio lævi, octo cornibus armato, *Dillen in Raii Syn.* 135, 2.
Ceratophyllum submersum, *Lin. S. P.* 1409.
Ceratophyllum demersum β, *Hudson Fl. Angl.* 419.
Ceratophyllum verrucosum, *Richard Mem. Mus.*

Ditches; perennial; September.

Leaves more numerous than in C. cornutum; *calyx-lobes* toothed at the tip.

Fam. XX. 55. HALORAGEÆ. R. Brown.

Flowers hermaphrodite, or unisexual; *calyx* adherent, leaved, or very small; *corolla* 2 or 4-petaled, or 0.—MALE. *Stamens* 1 or 8.—FEM. *Styles* 1 or 2; *ovary* adherent, 1 or 4-celled; ovule 1 in each cell, pendulous from the top of the cell; *perisperm* 0, or very thin, fleshy; corculum straight; radicle above, longer than the cotyledons.—*Plant* herbaceous, aquatic; *leaves* opposite, or whirled; *flowers* axillary, solitary.

Stamen 1; *ovary* 4-celled ..... CALLITRICHE. 338.
Stamen 1; *ovary* 1-celled ..... HIPPURIS. 339.
Stamens 8; *ovary* 4-celled ..... MYRIOPHYLLUM. 340.

I. 338. CALLITRICHE. Pliny. *Water-starwort.*

Monoicous or hermaphrodite; *calyx* 0; *petals* 0.—MALE. *Stamen* 1, exserted.—FEM. *Styles* 2; *ovary* 4-celled; cells 1-seeded, compressed, orbicular, margined; *perisperm* fleshy, thin. — *Leaves* opposite, upper leaves generally crowded; *bractea* 2 to each flower, coloured.

1. *Callitriche pallens.* *Pale water-starwort.*

Upper leaves aggregate; *fruit* scarcely margined.

Stellaria, *Raii Syn.* 289, 1.
Callitriche verna, *Lin. S. P.* 6.
Callitriche aquatica, *Hudson Fl. Angl.* 439.

Ditches and ponds; annual; April to October.

Leaves all reverse ovate.

β. *intermedia.* *Lower stem-leaves* and branch-leaves linear, 2-nicked at the tip.

Callitriche verna β, *Lin. Fl. Suec.* 3.
Callitriche intermedia, *Hoffm. Germ.* 1791, 2.
Callitriche dubia, *Roth Fl. Germ.* 1, 389.
Callitriche aquatica β, *Willdenow Hort. Berl.* 1, 8.
Callitriche autumnalis, *Schkuhr Bot. Handb.* 1, 8.

γ. *cæspitosa.* *Leaves* linear, rather obtuse; *stem* lying on the ground.

Stellaria minor et repens, *Raii Syn.* 289, 1?
Lenticula aquatica bifolia Neapolitana, *Park.* 1263?
Alsine palustris serpyllifolia, *Ger. em.* 614, 12.
Callitriche aquatica β, *Smith Fl. Brit.* 9.
Callitriche minima, *Hoppe Bot. Tasch.* 1792, 155.
Callitriche cæspitosa, *Schmid Fl. Stutgard*, 25.
Callitriche aquatica δ, *Willd. Hort. Ber.* 1, 8.

Sandy places, dried up ponds.

2. *Callitriche virens.* *Green water-starwort.*

Leaves uniform, equidistant; *fruit* membranaceously winged.

Stellaria aquatica foliis longis, tenuissimis, *Raii Syn.* 290, 3.
Callitriche autumnalis, *Lin. S. P.* 6.
Callitriche angustifolia, *Hoppe Bot. Tasch.* 1792, 155.
Callitriche aquatica, *Willd. Hort. Berl.* 1, 8.
Callitriche aquatica γ, *Smith Fl. Brit.* 9.

Ponds and ditches; annual; April to October.

Plant sunk; *leaves* linear, nicked; *flowers* all hermaphrodite.

II. 339. HIPPURIS. Dioscorides. *Mares-tail.*

Flowers hermaphrodite; *calyx* not divided, very small; *corolla* 0; *stamen* 1; *style* in the furrow of the anther; *ovary* 1-celled, crowned with the calyx and style; *perisperm* fleshy, thin.—*Stem* simple; *leaves* in whirls, linear; *flowers* axillary, solitary, whirled.

Hippuris vulgaris. *Common mares-tail.*

Leaves in whirls of 10 or 12, linear, pointed.

Limnopeuce, *Raii Syn.* 136, 1.
Canda equina fœmina, *Ger. em.* 1114, 6.
Hippuris vulgaris, *Lin. S. P.* 6.
Female horse-tail.

Rills and stagnant waters; perennial; May.

Root fibrous; *stem* erect, jointed, leafy above; *leaves* spreading, not in the least cut; *flowers* sessile.

β. *demersa.* *Leaves* very long, pellucid, pale, slender.

Limnopeuce q. Equisetum palustre linariæ scopariæ folio, *Dillen in Raii Syn.* 136, 1 *.

III. 340. MYRIOPHYLLUM. Dioscor. *Water-milfoil.*

Plant monoicous; *calyx* 4-parted.—MALE. *Stamens* 8.—FEM. *Ovary* 4-celled; *stigmata* sessile, four-toothed. —*Leaves* whirled, many-parted, lobes linear; *flowers* axillary, spiked; upper flowers male; lower female.

1. *Myriophyllum spicatum.* *Spiked water-milfoil.*

Leaves 4 in a whirl; *male flowers* interruptedly spiked, leafless; *female flowers* axillary; *stigmata* villous.

Potamogiton foliis pennatis, *Raii Syn.* 150, 17.
Millefolium aquaticum pennatum spicatum, *Park.* 1257.
Myriophyllum spicatum, *Lin. S. P.* 1409.
Feathered pond-weed.

Ditches and ponds; perennial; July and August.

Herb floating; *stem* branched, comb-like; *spike* single; *bracteæ* ovate, not cut, 4 to each whirl; *male flower* reddish.

β. *minus.* *Plant* small.

Potamogiton q. Millefolium aquaticum pennatum minus, foliolis singularibus latiusculis flosculis subjectis donatum, *Dillen in Raii Syn.* 151, 18.

2. *Myriophyllum verticillatum.* *Whirled water-milfoil.*

Leaves 5 in a whirl; *flowers* all axillary, whirled; *stigmata* thick, feathered at the tip.

Pentapterophyllon aquaticum flosculis ad foliorum nodos, *Raii Syn.* 316, 1.
Millefolium aquaticum minus, *Ger. em.* 827, 6; *Park.* 1257.
Myriophyllum verticillatum, *Lin. S. P.* 1410.

Ditches and ponds; perennial; July.

Herb floating; twigs upright, leafed to the top; *upper leaves* smallest; *flowers* rarely hermaphrodite.

Fam. XXI. 56. ONAGRARIÆ. Jussieu.

Calyx adherent, 2 or 4-parted; *petals* 2 or 4, on the top of the calyx; *stamens* 2, 4, or 8, alternating with the petals; *style* 1; *stigmata* 2 or 4; *ovary* 2 or 4-celled; ovules many, on a central placentarium, or 1 at the bottom of each cell; *perisperm* 0, or very thin; corculum straight, central; radicle below.—*Plant* herbaceous; *leaves* alternate or opposite; flowers racemose or axillary.

Stamens 2; *petals* 2; *carcerule* 2-seeded CIRCÆA. 341.
Stam. 8; *petals* 4, upright, regular;
capsule 4-celled; *seeds* naked ..... ŒNOTHERA. 342.
Stam. 8, declining; *pet.* 4, irregular;
capsule 4-celled; *seeds* comose ..... CHAMÆNERIOM. 343.
Stam. 8, upright; *pet.* 4, regular;
capsule 4-celled; *seeds* comose ..... EPILOBIUM. 344.

A. *Corolla* 2-petaled; *stamens* 2, interposed; *carcerule* 2-celled, 2-seeded; *seeds* upright.

I. 341. CIRCÆA. Dioscorides. *Enchanters-nightshade.*

Calyx short, discoid, 2-parted; *petals* 2, 2-cut; *stamens* 2; filaments clubshape; *style* clubshape, 2-glandular at the bottom; *carcerule* pearshaped, 2-celled, 2-seeded, hairy; hairs scaly.—*Leaves* opposite, petioled; *flowers* racemous, becoming deflected.

1. *Circæa ovalifolia.* *Oval-leaved enchanters-nightshade.*

Stem upright, hirsute; *racemes* many; *leaves* ovate, toothed, downy.

Circæa Lutetiana, *Raii Syn.* 289, 1; *Ger. em.* 351; *Lin. S. P.* 12.
Circæa Lutetiana major, *Park.* 351.
Circæa ovalifolia, *Stokes Bot. Mat. Med.* 26.
Bindweed nightshade.

Shady places, dunghills; perennial; June and July.

Root creeping; *stem* slightly branched; *leaves* dark green; *calyx* leathery.

2. *Circæa intermedia.* *Intermediate enchanters-nightshade.*

Stem upright, simple, bald; *racemes* solitary; *leaves* heartshape, toothed, pointed, bald; *capsule* ovate, globose.

Circæa alpina, *Flora Danica*, 256.
Circæa intermedia, *Erhart Herb.* 101.
Circæa alpina β, *Smith Fl. Brit.* 14.

Shady places, damp woods; perennial; July and August.

Stem like that of C. ovalifolia; *leaves* pale, serrated or toothed; *petiole* membranaceous, angled.

3. *Circæa alpina.* *Alpine enchanters-nightshade.*

Stem very branchy, ascending; *leaves* heartshape, serrate, pale, shining, bald; *calyx* membranaceous.

Circæa alpina, *Lin. S. P.* 12.
Circæa cordifolia, *Stokes Bot. Mat. Med.* 26.

Shady mountainous situations; perennial; July?

Stem diffused at bottom; joints red; *leaves* pale green; *petiole* membranaceous, angled; *racemes* many, terminal and axillary.

B. *Corolla* 4-petaled; *stamens* 8, opposite and interposed; *capsule* 4-celled, 4-valved; *placentarium* central; *seeds* many.

II. 342. ŒNOTHERA. Theophrast. *Evening-primrose.*

Calyx long; limb 4-parted, deciduous; *petals* 4; *stamens* 8; *pollen* viscous; *style* 1; *stigmata* 4; *capsule* long, bluntly 4-sided, 4-celled, 4-valved, many-seeded; *placentarium* 4-sided; *seeds* naked.

Œnothera biennis. *Biennial evening-primrose.*

Stem muricatedly villous; *leaves* ovate, lanceolate, flat; *stamens* shorter than the corolla; *capsule* conical, rather swelled below.

Lysimachia lutea Virginiana, *Ger. em.* 475, 4.
Œnothera biennis, *Lin. S. P.* 492.
Tree primrose.

Sandy places, naturalized; biennial; July to November.

Stem 3 feet high; *flowers* yellow, very large, open in the evening.

III. 343. CHAMÆNERION. Gesner. *Persian-willow.*

Calyx long, bent upwards, deciduous; *petals* 4, unequal; *stamens* 8, declining; pollen not viscous; *stigmata* 4, revolute; *capsule* long, bluntly 4-sided, 4-celled, 4-valved; placentarium 4-sided; *seeds* many, comose.—*Leaves* lanceolate, sessile; *flowers* spiked, large, reddish.

Chamænerion spicatum. *Spiked Persian-willow.*

Leaves scattered, linear, lanceolate, not cut, veined, bald; *peduncles* in the axillæ of the bracteæ; spike pyramidical.

Lysimachia speciosa, quibusdam Onagra dicta, siliquosa, *Raii Syn.* 310, 1.
Chamænerion, *Ger. em.* 477, 7.
Chamænerion flore Delphinii, *Park. Par.* 270.
Epilobium angustifolium, *Lin. S. P.* 492.
Epilobium spicatum, *Lamarck Enc. Meth.* 2, 373.
Rosebay willow-herb. French willow.

Fields and hedges; perennial; July.

Root erect; *stem* 3 feet high, upright, branched above; *spike* leafless; *flowers* alternate, purple or white; *ovary* woolly; *stamens* and *pistils* move regularly during impregnation; *pollen* blue.—Suckers of the root eatable; herb in infusion fermentible and intoxicating; down of the seed mixed with cotton may be manufactured.

IV. 344. EPILOBIUM. Gesner. *Willow-herb.*

Calyx long, limb 4-parted, deciduous; *petals* 4, equal; *stamens* 8, upright; *pollen* not viscous; *capsule* long, bluntly 4-sided, 4-celled, 4-valved; *placentarium* 4-sided; *seeds* many, comose.—*Leaves* lanceolate, mostly sessile; lower opposite; upper mostly alternate; *flowers* reddish; *racemes* mostly leafy.

a. *Style clubshape*; *stigmata* 4, *revolute.*

1. *Epilobium hirsutum.* *Hairy willow-herb.*

Root creeping; *stem* much branched, hirsute; *leaves* half-embracing the stem, lanceolate, serrate, rather bald; *veins* hairy.

Lysimachia siliquosa hirsuta magno flore, *Raii Syn.* 311, 2.
Lysimachia siliquosa, *Ger. em.* 476, 6.
Epilobium hirsutum, *Lin. S. P.* 494.
Epilobium ramosum, *Hudson Fl. Angl.* 162.
Codded willow-herb. *Codlings and Cream.*

Watery places and holts; perennial; July.

Roots stoloniferous; *stem* upright, hairy, hairs pinnate; *petals* larger than the calyx, rose-colour.—Shoots when quite fresh gathered have a transitory fragrance resembling scalded codlings, which vanishes in a few minutes.

2. *Epilobium parviflorum.* *Smallflowered willow-herb.*

Root fibrous; *stem* nearly simple, villous; *leaves* sessile, alternate, lanceolate, toothed, downy on both sides; down soft.

Lysimachia siliquosa hirsuta parvo flore, *Raii Syn.* 311, 3.
Lysimachia sylvatica, *Ger. em.* 479, 8.
Lysimachia siliquosa sylvestris hirsuta, *Park.* 549.
Epilobium hirsutum β, *Lin. S. P.* 494.
Epilobium villosum, *Curtis Fl. Lond.*
Epilobium parviflorum, *With. Bot. Arr.* 367.
Epilobium molle, *Lamarck Encycl. Meth.* 2.
Epilobium pubescens, *Roth Germ.* 2, 435.

Watery places; perennial; July.

Stem densely woolly, slightly branched above; *leaves* toothed; *flowers* small.

3. *Epilobium montanum.* *Mountain willow-herb.*

Stem round; *leaves* ovate, lanceolate, toothed, bald, veins woolly; *petioles* short.

Lysimachia campestris, *Raii Syn.* 311, 4; *Ger. em.* 478, 11.
Lysimachia siliquosa major, *Park.* 548.
Epilobium montanum, *Lin. S. P.* 494.

Woods, rocks, and walls; perennial; July.

Stem upright, mostly simple; *lower leaves* opposite; upper leaves alternate, slender; *flowers* purple, small.

b. *Style undivided*; *stigma* 1.

4. *Epilobium tetragonum.* *Squarestalk willow-herb.*

Stem 4-sided, rather bald; *leaves* lanceolate, bald, toothed; lowermost leaves opposite; *style* clubshape, undivided.

Lysimachia siliquosa glabra media sive minor, *Raii Syn.* 311, 5.
Epilobium tetragonum, *Lin. S. P.* 494.

Bogs and ditches; perennial; July.

Stem upright, branchy, rather bald; *leaves* nearly lanceolate.

β. *roseum.* *Stem* rather woolly; *leaves* ovate, lanceolate.

Epilobium roseum, *Symons Syn.* 198.

5. *Epilobium palustre.* *Marsh willow-herb.*

Stem round, upright, rather hirsute; *leaves* lanceolate, not cut, bald; *style* linear, undivided; *ovary* pubescent.

Lysimachia siliquosa glabra minor angustifolia, *Raii Syn.* 311, 6; *Ger. em.* 479.
Epilobium palustre, *Lin. S. P.* 496.

Bogs and ditches; perennial; July.

Stem branched; *leaves* sessile, half stem-clasping, rarely toothed.

6. *Epilobium alsinefolium.* *Chickweed willow-herb.*

Root creeping; *stem* decumbent, 4-sided; *leaves* petioled, ovate, acute, toothed; *style* clubshape, undivided.

Lysimachia siliquosa glabra minor latifolia, *Raii Syn.* 311, 7.
Epilobium montanum δ, *Willd. S. P.* 2, 316.
Epilobium alsinefolium, *Villars Delph.* 3, 511.

Mountainous places; perennial; July.

Roots tufted; *flowers* rose-colour.

7. *Epilobium alpinum.* *Alpine willow-herb.*

Root creeping; *stem* decumbent at bottom, rather 4-sided; *leaves* elliptical, lanceolate, blunt, slightly toothed, bald, rather shining; *racemes* 3 or 4-flowered; *style* clubshape, undivided.

Epilobium alpinum, *Lin. S. P.* 495.

Alpine rivulets; perennial; June and July.

Stem 9 inches high, simple; *petioles* short; *flowers* small; *ovary* almost bald.

Fam. XXII. 57. POMACEÆ. *Rosacearum Sectio*, Jussieu.

Calyx adherent, persistent; limb 5-cut; *petals* 5, on the calyx; *stamens* indefinite, about 20, on the calyx below the petals; *ovary* simple, adherent to the ovary; *ovules* ascending, in the inner angle of the cells; *styles* many; *fruit* a pome, umbilicated, crowned, many-celled; *perisperm* 0, or very thin, fleshy; corculum straight; radicle below.—*Stem* woody, arborescent; *leaves* alternate, simple or pinnate; *flowers* complete, hermaphrodite.

Pome 5-celled; cells cartilaginous, 2-seeded; *seed* ascending ..... PYRUS. 345.
Pome 5-celled; cells cartilaginous, 2-seeded; *seed* peritropal ..... CRATÆGUS. 346.
Pome 5-celled; cells bony, 2-seeded; *seed* ascending ..... MESPILUS. 347.

I. 345. PYRUS. Pliny. *Pear.*

Calyx 5-cut; *petals* 5-cut; *styles* 5; *pome* spherical, 5-celled; cells cartilaginous, 2-seeded; *seed* ascending.

a. Malus. *Leaves ovate, simple; stipules linear; corolla reddish; styles joined at bottom; pome globular, umbilicated at top and bottom.*

1. *Pyrus sylvestris.* *Wild pear.*

Leaves ovate, acute, serrated, bald; *umbell* simple, sessile; *corolla-claws* shorter than the limb of the calyx.

Malus sylvestris, *Raii Syn.* 452, 2; *Ger. em.* 1461, 1; *Park.* 1502.
Pyrus Malus, *Lin. S. P.* 686.
Malus communis, *De Candolle Fl. Gall.* 3678.
Crab-tree. Wilding.

Woods and hedges; arborescent; May.

Leaves when young downy beneath; *stipules* linear; *umbells* terminal; *fruit* acid, acerb, the size of a chestnut; *styles* bald.—Wood hard, takes a good polish; bark dyes yellow, juice of the fruit called verjuice, very acerb, astringent, repellent, and useful in sprains.

β. *sativa.* *Leaves* villous underneath; *fruit* more or less sweet; *style* villous.

Malus sativa, *Raii Syn.* 451, 1; *Ger. em.* 1459.
Pyrus Malus, β to ζ, *Lin. S. P.* 686.
Apple-tree.

Cultivated in numerous variations; arborescent; May.

Leaves slightly wrinkled, unequally serrate, mostly reverse ovate, oval.—Fruit excellent, either raw or dressed; juice fermented yields cider, a good cooling drink.

b. *Corolla white; styles free at bottom; pome top-shape, umbilicated at the top.*

2. *Pyrus communis.* *Common pear.*

Leaves ovate, serrated; *peduncles* corymbose.

Pyraster seu Pyrus communis, *Raii Syn.* 452, 1.
Pyrus sylvestris, *Ger. em.* 1458.
Pyrus communis, *Lin. S. P.* 686.
Pyrus Achras, *Gærtner Fr. et Sem.* 2, 44.
Wild pear-tree. Choke pear. Iron pear.

Woods and hedges; arborescent; April.

Tree upright; branches dependent, spinous; *leaves* blunt, when young covered with a deciduous down; *stipules* linear; *corymbus* villous.—*Wood* light, smooth, compact, easily cut and turned; *fruit* austere.

β. *inermis. Branches* without spines.

Pyrus sativa, *Raii Syn.* 452, 1; *Ger. em.* 1455.

Cultivated in numerous varieties.

Fruit sweet, nutritive; juice of the fruit fermented forms perry, which comes nearer the taste of grape wine than cider does, and is mostly used to mix with wines.

c. Sorbus. *Leaves pinnate, styles 3.*

3. *Pyrus aucuparia.* *Fowling pear.*

Leaves pinnate, leaflets oblong, slightly petioled, equally serrated, bald on both sides, when young downy beneath; *flowers* corymbose; *styles* mostly 3.

Sorbus sylvestris foliis domesticæ similis, *Raii Syn.* 452, 2.
Sorbus sylvestris, sive Fraxinus bubula, *Ger. em.* 1473.
Ornus, sive Fraxinus sylvestris, *Park.* 1419.
Sorbus aucuparia, *Lin. S. P.* 683.
Mespilus aucuparia, *Scopoli Carn.* 598.
Pyrus aucuparia, *Gærtner Fr. et Sem.* 2, 45.
Quicken tree. Wild ash. Wild service. Quickbeam tree. Roan tree.

Mountainous woods, and hedges; arborescent; May.

Leaves pinnate with a terminal leaflet, stipuled; *corymbus* terminal, much branched; *pome* the size of a pea, scarlet, acid; *seeds* 2 in each cell.—Wood solid, soft, tough, used to prevent witchcraft and enchantment by a piece being carried about a person, or by small cattle being driven through a hoop made of it; berries dried and powdered

nutritive, and being infused in water yield an acidulous kind of perry; the berries are also used as a bait for redwings and fieldfares.

4. *Pyrus domestica.* *Household pear.*

Leaves pinnate; leaflets equal, ovate, oblong, edge contiguous to the main petiole, upper part serrated, villous beneath; *flowers* panicled.

Sorbus, *Raii Syn.* 452, 1; *Ger. em.* 1471, 1.
Sorbus legitima, *Park.* 1420.
Sorbus domestica, *Lin. S. P.* 684.
Pyrus Sorbus, *Gærtner Fr. et Sem.* 2, 45.
Pyrus domestica, *Engl. Bot.* 350.
True service tree. Sorb. Sorb apple. Servis.

Mountainous woods; arborescent; May.

Leaves pinnate with a terminal leaflet; hairs deciduous; *flowers* white; *styles* 5; *pome* reverse ovate, reddish. — *Fruit* when ripe astringent.

5. *Pyrus pinnatifida.* *Pinnatifid pear.*

Leaves pinnatifid, inclining to pinnate, downy beneath; *flowers* corymbose.

Sorbus hybrida, *Lin. S. P.* 684.
Sorbus pinnatifida, *Ehrath Herb.*

Mountains, and cultivated; arborescent; May.

Leaves lobed above, pinnate at bottom; bald above, white beneath; *corymbus* many-flowered; *pome* scarlet.

II. 346. CRATÆGUS. Theophrastus. *Hawthorn.*

Calyx 5-cut; *petals* 5; *styles* 2 to 5; *pome* spherical, 5-celled; cells cartilaginous, 2-seeded; *seeds* peritropal.— *Leaves* angular; *fruit* hard.

1. *Cratægus alpina.* *Alpine hawthorn.*

Leaves simple, ovate, cut, serrate, tomentose beneath; *flowers* corymbose.

Mespilus alni folio, subtus incano, Aria Theophrasti dicta, *Raii Syn.* 453, 1.
Aria Theophrasti, *Ger. em.* 1327, 2.
Sorbus sylvestris Aria Theophrasti dicta, *Park.* 1421.
Cratægus Aria, *Lin. S. P.* 681.
Sorbus Aria, *Willd. S. P.* 2, 102.
Pyrus Aria, *Smith Fl. Brit.* 534.
Cumberland Hawthorn. White-beam tree.

Limestone mountains; arborescent; May.

Twigs tomentose; *leaves* doubly serrated, bald above; veins parallel; *corymbus* terminal; *flowers* white; *styles* 2

or 4; *pome* red, floury, astringent.—Plants bear lopping, and do not kill grass growing under them; timber tough, smooth, hard; charcoal used for gunpowder; fruit when rotten ripe eatable.

2. *Cratægus torminalis.* *Griping hawthorn.*

Leaves heartshape, ovate, 7-lobed, deeply serrate; lowest lobes divaricating, bald; *flowers* corymbose.

Mespilus apii folio, sylvestris, non spinosa, seu Sorbus torminalis, *Raii Syn.* 453, 2.
Sorbus torminalis, *Ger. em.* 1471, 2; *Persoon Syn.* 2, 38.
Sorbus torminalis seu vulgaris, *Park.* 1420.
Cratægus torminalis, *Lin. S. P.* 681.
Pyrus torminalis, *Smith Fl. Brit.* 532.
Pirus torminalis, *Stokes Bot. Mat. Med.* 121.
Wild-service tree. Wild sorb-apple.

Woods and hedges; arborescent; April and May.

Bark smooth; *leaves* unequally 7-lobed; petioles long; *corymbus* branched, many-flowered; *pome* dotted, austere.

III. 347. MESPILUS. Theophrastus. *Medlar.*

Calyx 5-cut; *petals* 5; *styles* 2 to 5; *pome* spherical, 5-celled; cells 2-seeded, bony; *seeds* ascending.

a. *Leaves angular; stipules large, leaflike.*

1. *Mespilus digyna.* *Two-styled medlar.*

Stem spinous; *leaves* bald, 3-cut, blunt, toothed; *flowers* rather corymbose; *peduncles* and *calyx* rather smooth; calyx-segments lanceolate, pointed.

Cratægus Oxyacantha, *Willd. S. P.* 1005.
Mespilus Oxyacantha, *Gærtner Fr. et Sem.* 2, 43.
Cratægus Oxyacanthoides, *De Candolle Fl. Gall.* 3687.
Mespilus Oxyacantha 3, *With. Bot. Arr.* 561.

Hedge rows; arborescent; May and June.

Branches bald, thorny; *leaves* bald; *flowers* white or rose-coloured; *berry* red.

2. *Mespilus monogyna.* *One-style medlar.*

Stem spinous; *leaves* bald, 3-cut, lobes pointed, serrate; *flowers* corymbose; *peduncles* and *calyx* downy, calyx-segments lanceolate, pointed, reflected; *style* 1.

Mespilus apii folio sylvestris spinosa, sive Oxyacantha, *Raii Syn.* 453, 3.
Oxyacanthus, *Ger. em.* 1327, 1.
Spina appendix vulgaris, *Park.* 1025.
Cratægus monogyna, *Sibthorp Fl. Ox.* 456.
Mespilus Oxyacantha, *Smith Fl. Brit.* 2, 529.
Hawthorn. White thorn. May.

Woods and hedges; arborescent; May.

Branches thorny; *leaves* bald on both sides; *flowers* white or rose-colour; *berry* red or yellow.—Plant excellent for fences; wood hard and tough.

β. *Glastonburiensis.* *Stipules* very large, kidneyshape, toothed; *flowers* large, coming out twice a year.

Cratægus Oxyacantha 4, *With. Bot. Arr.* 561.
Glastonbury thorn.

b. *Leaves not cut.*

3. *Mespilus Germanica.* *German medlar.*

Leaves lanceolate, tomentose beneath; *flowers* sessile, solitary, terminal; *calyx-lobes* long, pointed.

Mespilus, *Dillen in Raii Syn.* 453, 1*.
Mespilus Germanica, *Lin. S. P.* 684.

Hedges; arborescent; May.

Branches thorny; *leaves* lanceolate; *flowers* white, downy, tip fringed; fringes large.—Fruit, when thoroughly ripe, acerb, astringent.

β. *sativa.* *Stem* and *branches* spineless; *leaves* ovate, lanceolate.

Mespilus sativa, *Ger. em.* 1453, 1.
Mespilus vulgaris, *Park.* 1422.

Cultivated for its fruit.

γ. *abortiva.* *Stem* spineless; *styles* and *seed* 0.

Fam. XXIII. 58. ROSACEÆ.

Calyx persisting, pitchershape, contracted at the neck, limb divided; lobes sometimes with appendages; *petals* 5, inserted on the top of the calyx; *stamens* numerous, indefinite, inserted on the calyx under the petals; *ovaries* free, many, enclosed in the fleshy, persistent calyx; ovules pendulous; *styles* many, 1 to each ovary, terminal, with a lateral furrow; *stigmata* oblique; *akenium* 1-seeded; perisperm 0; corculum straight; radicle above.—*Stem* shrubby, woody, when injured a strong shoot overtopping the original stem is thrown up from the root; *leaves* pinnate; *stipules* adherent to the petiole, armed with thorns, or bristles; bristles always straight and tipped with a gland; *plants* polymorphous, species difficultly distinguishable.

348. ROSA. Pliny. *Rose.*

Akenia intermixed with hairs.

a. Rosæ cinnamomeæ. *Stem bristled; bristles deciduous; thorns often straight; flowers bracteated.*

1. *Rosa cinnamomea.* *Cinnamon rose.*

Flowers bracteated; *germen* globular; lobes simple; *stem* bristled; *leaflets* lanceolate, oblong, serrate.

Rosa cinnamomea, *Lin. S. P.* 703.

Pastures; shrubby; May.

Stem 5 feet high; *bristles* deciduous; *thorns* often straight; *leaflets* ash-green above, downy; down soft; terminal leaflet much the largest; *petioles* tomentose; *stipules* serrated, serratures glandular; *peduncles* bald; *bracteæ* very broad, shorter than the peduncles; *corolla* reddish, cupshape; *fruit* globose, bald, orange-colour.

b. Rosæ spinosissimæ. *Flowers scarcely bracteated; stem bristly; bristles persistent.*

2. *Rosa rubella.* *Reddish rose.*

Flowers not bracteated; *stem* and *branches* bristled; *germen* rather pitchershape; *leaflets* serrated; *thorns* very few, very slender, nearly equal.

Rosa rubella, *Engl. Bot.* 2521.

Sands by the sea; shrubby; July.

Shrub 4 feet high; *leaflets* elliptical, bald on both sides, paler beneath, two or three upper pairs and the odd one larger than the rest; *corolla* reddish, sometimes red or variegated.

3. *Rosa spinosissima.* *Very-prickly rose.*

Flowers not bracteated; *stem* bristled; *germen* globular; *leaflets* serrate; *thorns* crowded, very unequal in size.

Rosa pumila spinosissima, foliis pimpinellæ glabris, flore albo, *Raii Syn.* 455, 5.
Rosa pimpinellæ folia, *Ger. em.*
Rosa pimpinella, sive pomifera minor, *Park.* 1018.
Rosa spinosissima, *Lin. S. P.* 705.
Rosa pimpinellifolia β, *Lamarck Fl. Fr.* 4, 438.
Burnet rose. *Pimpernel rose.*

Fields, in gravel and sand; shrubby; July.

Shrub 2 feet high, or more in the shade; *leaflets* dark green, not shining, paler underneath, 2 upper pair and odd leaflet largest; *corolla* white, yellowish at bottom, rarely

pale red, or with reddish veins, or white with a pink spot; *fruit* bald, globular or depressed, dark purple, then black, sometimes blood red.—Ripe fruit eaten either raw, or preserved; juice dyes silk and cotton of a peach colour.

4. *Rosa involuta.* *Involuted rose.*

Flowers not bracteated; *stem* bristly; *germen* globular; *leaflets* doubly serrate, bald above; *thorns* very crowded.

Rosa involuta, *Smith Fl. Brit.* 1398.

Western coast of Scotland; shrubby; June.

Shrub 3 feet high; bristles persistent; *leaflets* elliptic, bald above; main rib sometimes hairy, glandular; veins beneath rough; upper pair and odd leaflet largest; *corolla* cupshape, petals reverse heartshape, reddish, whitish at bottom; *fruit* bristly.

5. *Rosa Doniana.* *Don rose.*

Flowers not bracteated; *stem* bristly; *calyx-lobes* simple; *leaflets* doubly serrate, hirsute on both sides; *thorns* straight, unequal, scattered.

Rosa Doniana, *Woods in Lin. Tr.* 12, 185.

Mountains; shrubby; June.

Shrub 2 or 5 feet high; bristles persistent; *leaflets* elliptic, upper pair and odd leaflet largest; *corolla* expanded; petals white, reverse heartshape; *fruit* globular, bristly.

6. *Rosa gracilis.* *Slender rose.*

Flowers not bracteated; *stem* bristly; *calyx lobes* simple; *leaflets* doubly serrate, hirsute on both sides; *large thorns* sicklelike.

Rosa villosa, *Engl. Bot.* 583.

Hills; shrubby; June.

Shrub 10 feet high; bristles persistent; *leaflets* elliptic, edge and main rib beneath glandular; upper pair and odd leaflet largest; *flower* nearly saucershape; petals reverse heartshape, beautifully reddish, white at bottom; *fruit* globose.

7. *Rosa Sabini.* *Sabine rose.*

Flowers not bracteated; *stem* bristly; *germen* globular; *calyx-lobes* pinnate; *leaflets* doubly serrate.

Rosa Sabini, *Woods in Lin. Tr.* 12, 186.

Mountains; shrubby; June.

Shrub 6 feet high; bristles persistent; *leaflets* elliptic; upper pair and odd leaflet largest; veins beneath rough; main rib and edge glandular; upper surface hairy, hairs scattered; *flowers* reddish, open, large; *fruit* globose.

c. Rosæ villosæ. *Stem not bristly; thorns straight, or at least not hooked; stipulæ not changing into bracteæ.*

8. *Rosa villosa.* *Villous rose.*

Germen nearly globose; *calyx-lobes* simple; *thorns* nearly straight, equal; *leaflets* rhomboid elliptical; *bracteæ* elliptic.

Rosa villosa, *Lin. S. P.* 704.
Rosa mollis, *Engl. Bot.* 2459.
Rosa pomifera, *Gmelin Fl. Bad. Als.* 2, 410.
Rosa glandulosa, *Lamarck Fl. Tr.* 6, 539.
Rosa Helvetica, *Rœmer Arch.* 1, 2, 6.

Woods; shrubby; June.

Shrubs 8 feet high; *leaflets* doubly serrate, upper pair and odd leaflet largest, hirsute on both faces, above very soft, beneath wrinkled, glandular near the edge; *flowers* concave, deep red, rarely white with blood red spots, or reddish; *fruit* bristled, red.

9. *Rosa scabriuscula.* *Roughish rose.*

Germen elliptical; *calyx-lobes* nearly simple; *bracteæ* elliptical; *thorns* rather straight, nearly equal; *leaflets* narrow elliptic, doubly serrate.

Rosa scabriuscula, *Engl. Bot.* 1896.

Hedges and river banks; shrubby; June.

Shrub 6 feet high; *leaflets* very soft, edge glandular, especially on the under surface; upper pair and odd leaflet largest; *flowers* concave; petals white, the blood-red spots of the bud remaining; *fruit* large, red.

10. *Rosa heterophylla.* *Various-leaved rose.*

Germen nearly globular; *calyx-lobes* rather pinnate; *thorns* rather straight, nearly equal; *bracteæ* lanceolate.

Rosa heterophylla, *Woods in Lin. Tr.* 12, 195.

Mountains; shrubby; June.

Shrub 9 feet high; *leaflets* elliptical, or ovate, oblong, rounded at bottom, very varying; upper pair and odd leaflet larger, doubly serrated, soft, downy, glandular on both sides; *petals* white, spotted with blood-red.

11. *Rosa pulchella.* *Pretty rose.*

Germen reverse ovate; *calyx-lobes* pinnnate; *thorns* rather straight, nearly equal; *petals* crenate.

Rosa pulchella, *Woods in Lin. Tr.* 12, 195.

Limestone banks; shrubby; June.

Shrub 2 feet high; *leaflets* elliptic, hollow, hairy on both sides, glandular beneath; doubly serrate; upper pair and odd leaflet largest; *flowers* concave; petals deep reddish; edge crenate, glandular.

12. *Rosa tomentosa.* *Cloth-leaved rose.*

Calyx-lobes pinnate; *thorns* rather straight, nearly equal; *petals* not in the least cut; *bracteæ* elliptic; *leaflets* doubly serrate.

Rosa sylvestris pomifera major nostras, *Raii Syn.* 455, 6.
Rosa pomifera major, *Park. Par.* 418.
Rosa villosa, *Hudson Fl. Angl.* 219.
Rosa tomentosa, *Smith Fl. Brit.* 539.
Rosa Reynieri, *Rœmer Archiv.* 1, 2, 7.
Great English apple-rose.

Hedges and bushy places; shrubby; June and July.

Shrub 8 feet high; *leaflets* elliptic, sharply triangular at the tip, nappy on each side, doubly serrate, glandular; upper pair and odd leaflet larger; *flowers* rather flat, petals white at bottom, sometimes spotted with dark red; *fruit* elliptical, broad, red; *plant* varies very much.

13. *Rosa nuda.* *Naked rose.*

Germen globose; *calyx-lobes* pinnate; *thorns* nearly straight; *leaflets* serrate.

Rosa nuda, *Woods in Lin. Tr.* 12, 205.

Mountains; shrubby; June.

Shrub 7 feet high; *leaflets* elliptical, upper pair and odd leaflet largest; smooth on both sides; serratures unequal but simple; *flowers* reddish; *fruit* globose.

d. Eglanteriæ. *Stem thorny; thorns hooked; bristles* 0; *leaflets doubly serrate, whole lower face glandular; glands odoriferous.*

14. *Rosa rubiginosa.* *Rusty rose.*

Germens reverse ovate; *thorns* unequal, large, hooked; *leaflets* hirsute, glandular beneath, doubly serrate.

Rosa sylvestris odora, *Raii Syn.* 454, 3; *Ger. em.* 1272, 1.
Rosa sylvestris odora, seu Eglanteria flore simplici, *Park. Par.* 418.
Rosa Eglanteria, *Lin. S. P. ed.* 1, 491.
Rosa rubiginosa, *Lin. Mant.* 2, 564.
Rosa suavifolia, *Fl. Dan.* 870.
Eglantine. Sweetbriar.

Dry soils, especially chalk; shrubby; June and July.

Shrub compact, 7 feet high; thorns scattered, those of the root-shoots unequal; *leaflets* elliptic, upper pair and odd leaflet largest, hirsute above, glandular beneath, serratures glandular; glands odoriferous; *flowers* concave, petals pink; *styles* distinct; *fruit* reverse ovate, armed with strong bristles at the base, when ripe blood-red.

15. *Rosa micrantha.* *Small-flowered rose.*

Fruit swollen elliptic; *thorns* hooked, nearly equal; *leaflets* hirsute, glandular beneath, doubly serrate.

Rosa micrantha, *Engl. Bot.* 2490.
Sweetbriar.

Hedges and bushy places; shrubby; June and July.

Shrub 8 feet high, generally loose and straggling; thorns crowded; those of the root-shoots nearly equal; *leaflets* elliptic; upper pair and odd leaflet largest; *flowers* saucer-shape, reddish; *style* simple; *fruit* small, scarlet.

e. Rosæ caninæ. *Stem thorny; thorns hooked; bristles* 0; *lower surface of the leaflets not glandular throughout.*

16. *Rosa Borreri.* *Borrer rose.*

Germen elliptic; *calycine pinnæ* crowded; *thorns* hooked, nearly equal; *leaflets* hirsute, not glandular, doubly serrate.

Rosa dumetorum, *Engl. Bot.* 2579.
Rosa Borreri, *Woods in Lin. Tr.* 12, 210.

Hedges and thickets; shrubby; July.

Shrub 10 feet high; *leaflets* deep green, shining, upper pair and odd leaflet largest, odd leaflet broadest; serratures glandular; *flowers* flesh-colour or reddish; *styles* simple; *fruit* elliptic, deep red.

17. *Rosa cæsia.* *Bluish-leaf rose.*

Germen elliptical; *calycine pinnæ* few; *thorns* hooked, nearly equal; *leaflets* hirsute, not glandular, doubly serrate.

Rosa cæsia, *Engl. Bot.* 2367.

Mountains; shrubby; July.

Shrub close, 5 feet high; *leaflets* elliptic, upper pair and odd leaflet largest, ribs beneath prominent, hirsute; serratures glandular; *flowers* reddish; *calycine pinnæ* very narrow; *styles* simple; *fruit* elliptic.

18. *Rosa sarmentacea.* *Briar rose.*

Styles distinct; *germen* ovate; *thorns* hooked; *leaflets* doubly serrate, quite bald.

Rosa canina, *Roth Fl. Germ.* 1, 218; and 2, 560.
Rosa sarmentacea, *Woods in Lin. Tr.* 12, 213.

Hedges and bushy places; shrubby; July.

Shrub 10 feet high; *leaflets* elliptic, upper pair and odd leaflet largest, rather pointed, bald, waxlike above; main rib beneath prickly; serratures unequal, divaricated, irregular serrate; *flowers* reddish, rather flat; *fruit* elliptic, scarlet, shining.

19. *Rosa bractescens.* *Large-bractea rose.*

Germen globose; *thorns* hooked; *leaflets* serrate, tomentose beneath; *bracteæ* overtopping the fruit.

Rosa bractescens, *Woods in Lin. Tr.* 12, 216.

Hedges; shrubby; June.

Shrub 7 feet high; *leaflets* elliptic, upper pair and odd leaflet largest; hairy above; beneath main-rib prickly, veins hairy; *flowers* flesh-colour, rather concave; *styles* simple; *fruit* globular.

20. *Rosa dumetorum.* *Bush rose.*

Styles distinct; *germens* elliptic, overtopping the bracteæ; *thorns* hooked; *leaflets* serrate, hirsute on both sides.

Rosa canina ξ, *Desvaux Journ. de Bot.* 2, 115.
Rosa dumetorum, *Thuilliers Fl. Par.* 250.

Hedges; shrubby; July.

Shrub 6 feet high; *leaflets* rather shining; upper pair and odd leaflet largest, odd leaflet broadest, rather pointed; *flowers* rather flat, reddish; *fruit* ovate, very broad or nearly globular, bald, red.

21. *Rosa collina.* *Hill rose.*

Styles distinct; *thorns* hooked, nearly equal; *leaflets* serrate, hirsute beneath.

Rosa collina, *Jacq. Fl. Austr.* 2, 58.

Hedges; shrubby; July.

Shrub 8 feet high; *leaflets* elliptic, upper pair and odd leaflet largest, very deeply serrate, above bald, dull; serratures cartilaginous at the tip; *flowers* rather flat, pale reddish; *fruit* elliptic.

22. *Rosa Hibernica.* *Irish rose.*

Germen globose; *thorns* hooked, unequal; *leaflets* serrate.

Rosa Hibernica, *Engl. Bot.* 2196.

Ireland; shrubby; June to November.

Shrub 3 feet high; *leaflets* elliptic, upper pair and odd leaflet largest, above bald, rather glaucous; beneath hairy, especially the main rib; *styles* simple; *fruit* globular, sometimes drawn out at the throat.

23. *Rosa canina.* *Dog rose.*

Styles distinct; *stem-thorns* hooked; petiole-thorns sickle-shape; *leaflets* keeled, serrated, bald.

Rosa sylvestris inodora, seu canina, *Raii Syn.* 454, 1; *Park.* 1017.
Rosa canina inodora, *Ger. em.*
Rosa canina, *Lin. S. P.* 704.
Wild briar. Dog rose. Hep-tree.

Hedges and bushy places; shrubby; June.

Shrub spreading, 8 feet high; *leaflets* narrow, elliptic, upper pair and odd leaflet largest, keeled, point turned on one side, quite bald, young leaves shining as if varnished; serratures pointed, unequal; *flowers* reddish, rarely white; the buds redder than the expanded flower; *fruit* elliptic, quite bald, shining, scarlet.—Fruit eatable, and made into a conserve; a decoction of the shoots, and especially of the roots, drank as an agreeable and exhilarating tea; dried leaves used as a substitute for China tea; flowers preserved with sugar and honey, and also used to prepare a spirituous liquor.

24. *Rosa surculosa.* *Shooting rose.*

Styles distinct; *thorns* hooked; *leaflets* flat, serrate, bald.

Rosa surculosa, *Woods in Lin. Tr.* 12, 228.

Roadsides and bushy places; shrubby; June.

Shrub 8 feet high; *leaflets* elliptical, pointed, upper pair and odd leaflet largest, odd leaflet heartshape at the base, above slightly hairy; beneath bald, dark; younger leaves purplish; *flowers* reddish; *styles* porrected; *fruit* elliptic, broad, red.

25. *Rosa systyla.* *Sisterhood rose.*

Styles united; *germen* oblong; thorns hooked, nearly equal; root-shoot-thorns crowded; *leaflets* serrate.

Rosa collina, *Engl. Bot.* 1895.
Rosa leucochroa, *Desvaux Journ. Bot.* 2, 113.
Rosa stylosa, *Lamarck Fl. Tr.* 6, 536.
Rosa brevistyla, *Lamarck Fl. Tr.* 6, 537.
Rosa systyla, *Bastard Fl. Anjou.*

Bushy places; shrubby; July.

Shrub slender, 12 feet high; root-shoots nearly upright; *leaflets* lanceolate, elliptic, upper pair and odd leaflet largest, keeled, pointed; bald above, ribs beneath hairy; *flowers* 1 to 8, saucershape, petals a beautiful pink, inclining to orange at the base, sometimes pale or even white; *styles* forming a porrected column; *fruit* elliptic, oblong, bald, scarlet, of a fine flavour.

26. *Rosa arvensis.* *Fallow rose.*

Styles united; *thorns* hooked; root-shoot-thorns few; *leaflets* elliptical, unequally serrate.

Rosa sylvestris altera minor, flore albo nostras, *Raii Syn.* 455, 4.
Rosa sylvestris, *Rœmer Arch. Bot.* 1, 2, 83.
Rosa repens, *Gmelin Fl. Bad. Als.* 2, 418.
Rosa canina β, *Fl. Germ.* 1, 218, and 2, 560.
Rosa arvensis, *Willd. S. P.* 2, 1066.
White dog rose.

Hedges in flat countries; shrubby; June and July.

Shrub 4 feet high; root-shoots long, trailing; *leaflets* roundish elliptical, lowest pair smallest, flat, inclining to crenate, bald on both sides, main rib sometimes hairy beneath; *flowers* 1 to 15, white, quite flat; *fruit* elliptical, often globular when solitary, blood-colour, of a fine flavour.

Fam. XXIV. 59. AGRIMONIACEÆ. *Roseacearum pars*, De Candolle. *Sanguisorbeæ*, Richard.

Calyx tubular, persisting; limb 4 or 5-cut, often bracteated in the sinuses; *petals* 4 or 5 on the top of the calyx, alternate with its lobes; sometimes 0; *stamens* as many as the calyx-lobes or indefinite, inserted on the calyx under the petals; *ovaries* 1-ovuled, 1-styled, solitary or definite, enclosed in the persistent pitchershape calyx; *akenium* inverted; *perisperm* 0; corculum straight; radicle above.—*Stem* herbaceous, or rather shrubby; *leaves* pinnate or digitate; *flowers* sometimes unisexual.

Cal. 4-lobed; *pet.* 0; *stam.* 30; *stigma* radiated ..... POTERIUM. 349.
Cal. 4-lobed; *pet.* 0; *stam.* 4; *stigma* simple ..... SANGUISORBA. 350.
Cal. 4-cut; *pet.* 0; *stam.* 4; *bracteæ* of the calyx 4 ..... ALCHEMILLA. 351.
Cal. 5-lobed; *pet.* 5; *stam.* 12 or 10 AGRIMONIA. 352.

I. 349. POTERIUM. Dioscorides. *Burnet.*

Flowers unisexual; *calyx* 4-lobed, coloured, 3-scaled on the outside; *petals* 0.—MALE. *Stamens* 30.—FEM. *Ovaries* 2; *styles* 1 or 2; *stigmata* radiated; *akenia* 2, immerged in the hardened angular tube of the calyx.—*Leaves* pinnate; *flowers* capitate.

Poterium minus. *Small burnet.*

Stem angular, spineless; *stamens* much longer than the calyx.

Sanguisorba minor, *Raii Syn.* 203, 1.
Pimpinella hortensis, *Ger. em.* 1045, 1.
Pimpinella vulgaris seu minor, *Park.* 582.
Poterium Sanguisorba, *Lin. S. P.* 1411.
Pimpinella Sanguisorba, *Gærtner Fr. et Sem.* 1, 162.
Garden burnet.

Chalky soils; perennial; July.

Root woody; *leaflets* roundish, serrate, bald; *peduncles* naked, terminal; *flowers* in heads; upper flowers female, stigmata exserted; lower flowers male.

II. 350. SANGUISORBA. Fuchs. *Great-burnet.*

Flowers hermaphrodite; *calyx* coloured, 4-lobed; scales 2 at the base; *petals* 0; *stamens* 4; *ovaries* 2; *stigmata* simple; *akenia* 2, immersed in the persistent tube of the calyx.—*Leaves* pinnate; *flowers* in heads, upper flowers expanding first.

Sanguisorba officinalis. *Shop great-burnet.*

Herb bald; *spine* ovate; *stamens* as long as the calyx.

Sanguisorba major flore spadiceo, *Raii Syn.* 203, 2.
Pimpinella sylvestris, *Ger. em.* 1045, 2.
Pimpinella major vulgaris, *Park.* 582.
Sanguisorba officinalis, *Lin. S. P.* 169.
Wild burnet.

Damp fields and pastures; perennial; June and July.

Stem 2 feet high, branched, rather naked; *leaflets* heart-shape, crenate.

III. 351. ALCHEMILLA. Tragus. *Ladies-mantle.*

Calyx 4-cut, 4-bracteated; *corolla* 0; *stamens* 4, very short; *ovary* 1; *akenium* enclosed in the persisting calyx. —*Leaves* palmately lobed, stipuled.

a. Alchemillæ veræ. *Root perennial; style* 1.

1. *Alchemilla vulgaris.* *Common ladies-mantle.*

Leaves kidneyshape, 9-lobed, acutely serrated, rather naked; *corymbus* terminal.

Alchemilla, *Raii Syn.* 158, 1; *Ger. em.* 949, 1.
Alchemilla major vulgaris, *Park.* 538.
Alchemilla vulgaris, *Lin. S. P.* 178.
Lion's foot. Lion's paw. Pied de Lyon. Great sanicle. Bears-foot North.

Fields and hilly pastures; perennial; June and July.

Stem panicled; *leaves* 7 to 9-lobed, lobes blunt; *stipules* cut.

2. *Alchemilla pubescens.* *Downy ladies-mantle.*

Leaves lobed, silky, acutely serrated; *stem* and *petioles* hairy, hairs close; *corymbus* terminal.

Alchemilla minor, *Hudson Fl. Angl. ed.* 1, 59.
Alchemilla vulgaris β, *Smith Fl. Brit.* 190.
Alchemilla pubescens, *Lamarck Encycl. Meth.*
Alchemilla hybrida, *Persoon Syn.* 1, 149.

Alpine pastures; perennial; July.

3. *Alchemilla alpina.* *Alpine ladies-mantle.*

Leaves digitate, serrate, silky beneath.

Alchemilla alpina pentaphyllos, *Raii Syn.* 158, 2.
Pentaphyllum petrosum, Heptaphyllum Clusii, *Ger. em.* 988, 5.
Tormentilla argentea, *Park.* 393.
Alchemilla alpina, *Lin. S. P.* 179.
Stone cinquefoil.

Alpine micaceous rocks; perennial; July.

Leaves 5-parted; *stem* upright; *calyx* silky on the outside.

b. Aphanes. *Root annual; styles* 2; *ovaries* 2, *one generally abortive.*

4. *Alchemilla arvensis.* *Fallow ladies-mantle.*

Leaves 3-cut, downy; lobes 2 or 3-cut; *flowers* sessile, axillary.

Percepier Anglorum, *Raii Syn.* 159, 1; *Ger. em.* 1594, 1.
Polygonum selinoides, *Park.* 449.
Aphanes arvensis, *Lin. S. P.* 179.
Alchemilla Aphanes, *Leers Fl. Herb.* 54.
Parsley breakstone, Herb-shops. *Percepier*, Bristol.

Barren sandy land; annual; April to November.

Stem much branched; *leaves* marked with lines; *stipules* cut; *calyx* urceolate.

IV. 352. AGRIMONIA. Brunsfel. *Agrimony.*

Calyx 5-lobed, bristly; bristles hooked; *petals* 5; *stamens* 12 to 20; *ovaries* 2; *styles* 2, terminal; *akenia* 2, enclosed in the persisting calyx.—*Leaves* pinnate, stipuled; *flowers* spiked, involucellated; *involucella* 2-lobed.

Agrimonia vulgaris. *Common agrimony.*

Leaves pinnate; leaflets ovate, oblong, deeply serrated; terminal leaflets petioled; *spikes* peduncled.

Agrimonia, *Raii Syn.* 202, 1; *Ger. em.* 712, 1.
Agrimonia vulgaris, *Park.* 594.
Agrimonia Eupatoria, *Lin. S. P.* 643.

Edges of fields; perennial; June and July.

Root creeping; *stem* 2 feet high, angular, hairy; *leaves* alternately pinnate; *stipules* pinnately cut; *spike* many-flowered; *flowers* yellow.

Fam. XXV. 60. DRYADEÆ. *Rosacearum tribus*, De Candolle, Jussieu. *Fragariacearum pars*, Nesler.

Calyx 4 or 5-toothed; sinus of the teeth often bracteolated on the outside; *petals* as many as the calyx-lobes; *stamens* many, indefinite, or rarely as many as the calyx-lobes and opposite to them; *ovaries* indefinite, rarely 5, free, 1-styled; *style* from the apex, or inner side, furrowed on the inner side; *stigmata* oblique, thickened; *ovule* 1, inverse, rarely ascending; *akenia* or *drupellæ* on the persisting calyx; *seeds* inverse, rarely ascending; perisperm 0; corculum straight.—*Stem* herbaceous, rarely shrubby.

Calyx naked; *stam.* many; *ovaries* capitate;
akenium covered with a fleshy sarcocarp .... Rubus. 358.
Cal. bracteated; *stam.* many;
akenium feathered, tailed ..... Dryas. 353.
Cal. bracteated; *stam.* many;
ovaries capitate, ending in a jointed tail .... Geum. 354.

Cal. bracteated; *stam.* 5; *petals* minute;
akenia on a dry receptacle ..... SIBBALDIA. 355.
Cal. bracteated; *stam.* many;
akenia many, on a dry receptacle ..... POTENTILLA. 356.
Cal. bracteated; *stam.* many;
akenia spread over a fleshy receptacle .. FRAGRARIA. 357.

I. 353. DRYAS. Linnæus. *Mountain-avens.*

Calyx 8 or 9-parted, naked; tube rather concave; *petals* 8 or 9; *stamens* many; *ovaries* headed; *style* terminal; *akenium* tailed, feathered; *seed* ascending.

Dryas chamædrifolia. *Germander mountain-avens.*
Leaves serrated.

Caryophyllata alpina chamædryos folio, *Raii Syn.* 253, 4.
Teucrium alpinum cisti flore, *Ger. em.* 659.
Chamædrys spuria montana cisti flore, *Park.* 106.
Dryas octopetala, *Lin. S. P.* 717.
Dryas octopetala chamædrifolia, *Persoon Syn.* 1, 57.
Dryas alpina, *Salisb. Prod.*

Stony alpine pastures; perennial; July and August.

Stem decumbent, woody; *leaves* ovate, rather revolute; above bald, shining; beneath white, tomentose; *peduncles* 1-flowered, solitary, long, upright; *flower* white, large; *calyx* hairy.

II. 354. GEUM. Pliny. *Herb-bennet.*

Calyx-tube concave; limb 5-parted, bracteated; *petals* 5; *stamens* many; *ovaries* headed, on a dry, cylindrical receptacle; *style* terminal, kneed, jointed; upper joint dissimilar; *akenium* headed, tailed; *seed* ascending.

1. *Geum urbanum.* *Town herb-bennet.*

Root-leaves lyrate, pinnate; stem-leaves ternate; *stipules* rounded, cut; *flowers* upright; *akenium-awn* hooked, naked.

Caryophyllata, *Raii Syn.* 253, 1; *Ger. em.* 994, 1.
Caryophyllata vulgaris, *Park.* 136.
Geum urbanum, *Lin. S. P.* 716.
Geum urbanum caryophyllatum, *Persoon Syn.* 1, 57.
Geum sordidum, *Salisb. Prod.*
Common avens. Herb-bennet.

Woods and hedges; perennial; May to August.

Root woody; *stem* branched at top; *leaflets* cut, serrated, hairy; *flowers* terminal, solitary, yellow; petals

shorter than the calyx.—*Roots* flavour ale, and prevent it from turning sour; are stomachic, and a good substitute for the Peruvian bark, in agues.

β. *majus.* *Petals* longer than the calyx.

Caryophyllata vulgaris majore flore, *Raii Syn.* 253, 2.
Caryophyllata vulgaris major, *Park.* 135.
Great-flowered avens.

2. *Geum intermedium.* *Intermediate herb-bennet.*

Leaves interrupted, pinnate; *flowers* mostly drooping; *calyx* spreading; *petals* longer than the calyx; *awn* feathered, twisted.

Geum rivale β, *Smith Fl. Brit.* 555.
Geum intermedium, *Ehraht Beytr.* 6, 143.

Woods and hedges; perennial; September.

Flowers large, yellowish.

3. *Geum rivale.* *Bankside herb-bennet.*

Root-leaves lyrate, interruptedly pinnate; *stipules* ovate, acute, cut; *flowers* drooping; petals as long as the calyx; *awn* feathered, twisted.

Caryophyllata montana purpurea, *Raii Syn.* 253, 3; *Ger. em.* 994, 2.
Caryophyllata montana, seu palustris purpurea, *Park.* 136.
Geum rivale, *Lin. S. P.* 717.
Water avens.

Fields and damp woods; perennial; June and July.

Root horizontal; *stem* branched at top, drooping; *leaves* deeply serrated; stem-leaves simple or ternate; *calyx* purplish; *petals* upright, reverse-heartshape, yellowish purple. —Root febrifuge, in common use in agues, instead of the Peruvian bark; also to cure ropy ale.

β. *grandiflorum.* *Flowers* double, or proliferous.

Childing avens, *Petiver Herb. Brit.* 40, 4.

III. 355. SIBBALDIA. Linnæus. *Sibbald.*

Calyx-tube concave; limb 5-lobed; lobes bracteated; *petals* 5, very small; *stamens* 5; *ovaries* 5, forming a head on a prominent receptacle; *style* lateral; *akenia* kidney-shape, hardened; *seed* inverse.

Sibbaldia procumbens. *Procumbent sibbald.*

Leaves ternate; leaflets bald above, hairy beneath; *flowers* corymbose; *petals* lanceolate, acute, as long as the calyx.

Pentaphylloides pumila foliis ternis ad extremitate trifidis, *Raii Syn.* 256, 6.
Sibbaldia procumbens, *Lin. S. P.* 406.
Scotch cinquefoil.

Micaceous alpine rocks; perennial; July.
Root woody; *leaves* stipuled.

IV. 356. POTENTILLA. Brunsfel. *Cinquefoil.*

Calyx-tube concave; limb 5 rarely 4-cut; bracteated; *petals* 5, rarely 4; *stamens* many; *ovaries* indefinite, forming a head, on a prominent receptacle; *styles* lateral; *akenium* hardened, kidneyshape; *seeds* appended.—*Stem* herbaceous, rarely shrubby.

a. *Leaves pinnate.*

1. *Potentilla fructicosa.* *Shrubby cinquefoil.*

Leaves pinnate, villous; *calyx-leaflets* linear, oblong, not cut, villous; *bracteæ* linear, slenderest below; *stem* shrubby.

Pentaphylloides fruticosa, *Raii Syn.* 256, 4.
Potentilla fruticosa, *Lin. S. P.* 709.

Mountainous woods; shrubby; June.
Stem 2 feet high, much branched; *upper leaves* ternate; *flower* solitary, terminal, golden.

2. *Potentilla anserina.* *Goose cinquefoil.*

Leaves interruptedly pinnate, silky; leaflets acutely serrate; *stem* creeping; *peduncles* axillary, 1-flowered.

Pentaphylloides Argentina dicta, *Raii Syn.* 256, 5.
Argentina, *Ger. em.* 993, 1.
Potentilla, *Park.* 593.
Potentilla anserina, *Lin. S. P.* 710.
Silver weed. *Wild tansey.* *Moors*, Yorkshire. *Moors corn*, Ireland.

Damp fields and holts; perennial; June and July.
Stem prostrate; *leaves* nearly lyrate; beneath silvery white; when young both sides silky; *calyx* silky; *petals* golden.—*Roots* eat like parsneps; *leaves* mildly astringent, used instead of Peruvian bark in agues.
β. *nuda.* *Leaves* not silky.

3. *Potentilla palustre.* *Marsh cinquefoil.*

Leaves pinnate; leaflets lanceolate, serrated above; *calyx* coloured; *petals* very small; *stem* creeping.

Pentaphylloides palustre rubrum, *Raii Syn.* 256, 2.
Pentaphyllum rubrum palustre, *Ger. em.* 987, 4.
Comarum palustre, *Lin. S. P.* 718.
Potentilla palustre, *Scopoli Carn.* 617.
Purple marshlocks.

Marshy spongy bogs; perennial; June and July.

Root creeping; *leaves* woolly beneath, sometimes in sevens, or digitate; *petioles* long; *flowers* panicled, blackish purple; *petals* pointed.—Root dyes red.

β. *villosa.* *Leaves* woolly on both sides.

Pentaphylloides q. Pentaphyllum palustre rubrum, crassis et villosis foliis Suecicum et Hibernicum Plukeneti, *Raii Syn.* 256, 3.

4. *Potentilla rupestris.* *Rock cinquefoil.*

Root-leaves pinnate; leaflets roundish oval, toothed, hairy; stem-leaves ternate; *stem* stiff, forked.

Pentaphylloides erectum, *Raii Syn.* 255, 1.
Pentaphyllum fragiferum, *Ger. em.* 991, 13; *Park.* 397.
Potentilla rupestris, *Lin. S. P.* 711.
Potentilla rubens, *Mœnch Meth.* 660.
Potentilla fragarioides, *Pour. Encycl.* 5, 586.
Strwberry cinquefoil. Upright bastard cinquefoil.

Alpine rocks; perennial; June and July.

Stem a foot high, branchy, downy; *leaves* lyrate, pinnate; leaflets veined, hairy; *root-stipules* linear; stem-stipules rhomboid, roundish; *peduncles* panicled; *petals* reverse heartshape, white; *akenia* smooth.

b. *Leaves digitate; receptacle bald.*

5. *Potentilla argentea.* *Silver cinquefoil.*

Leaves in fives; leaflets wedgeshape, cut above, edge turned over; beneath white, tomentose; *stem* decumbent.

Pentaphyllum erectum, foliis profunde sectis, subtus argenteis, flore luteo, *Raii Syn.* 255, 2.
Quinquefolium tormentillæ facie, *Ger. em.* 988, 7.
Pentaphyllum rectum minus, *Park.* 400.
Potentilla argentea, *Lin. S. P.* 712.
Wall cinquefoil. Tormentil cinquefoil.

Pastures; perennial; June.

Stem woolly; *leaves* above bald and green; *flowers* small, gold-yellow.

6. *Potentilla verna.* *Vernal cinquefoil.*

Root-leaves in sevens or fives; leaflets reverse oval, green on both sides, hairy beneath; *petals* reverse ovate, longer than the calyx; *stem* weak, procumbent.

Pentaphyllum parvum hirsutum, *Raii Syn.* 255, 3.
Pentaphyllum incanum minus repens, *Ger. em.* 989, 19.
Pentaphyllum minus repens lanuginosum, *Park.* 399.
Potentilla verna, *Lin. S. P.* 712.
Potentilla serotina, *Villars Delph.* 3, 564.

High barren pastures; perennial; April and May.

Stem branched, downy; *root-leaves* with long petioles; *petals* golden-yellow.

7. *Potentilla opaca.* *Opake cinquefoil.*

Root-leaves in sevens or fives; leaflets ovate, wedgeshape, toothed, hairy; *petals* reverse heartshape, scaly, longer than the calyx; *stem* threadshape, decumbent.

Potentilla opaca, *Lin. S. P.* 713.
Fragaria rubens, *Crantz Fasc.* 75.

Mountains; perennial; June.

Stem very slender, tufted; *petals* golden-yellow, with a brown spot at bottom.

8. *Potentilla aurea.* *Golden cinquefoil.*

Root-leaves in fives; stem-leaves in threes; leaflets wedge-shape; edges hairy, and toothed at the tip; hairs silky; *petals* reverse-heartshape, larger than the calyx; *stem* decumbent.

Quinquefolium minus flore aureo, *Ger. em.* 990, 11.
Potentilla aurea, *Lin. S. P.* 712.

Alps; perennial; July.

Stem ascending, hairy; *leaves* thin, membranaceous, shining, paler underneath; root-leaves with long petioles; *peduncles* very long, 1-flowered; *petals* deep golden or orange-colour.

c. *Leaves digitate; receptacle very hairy.*

9. *Potentilla alba.* *White cinquefoil.*

Root-leaves in fives; stem-leaves 3-leafletted; leaflets oval, oblong, connivent at top, serrated, bald above, gray and silky beneath; *stem* threadlike, procumbent, shorter than the leaves.

Quinquefolium sylvaticum majus, flore albo, *Ger. em.* 989, 10.
Potentilla alba, *Lin. S. P.* 713.
Fragaria alba, *Crantz Fasc.* 78.

Alpine hills; perennial; July and August.

Stem much branched; *petioles* of the root-leaves very long; *petals* white.

10. *Potentilla reptans.* *Creeping cinquefoil.*

Leaves acuminate; leaflets reverse oval, wedgeshape, serrated; *stipules* not cut; *peduncles* axillary, 1-flowered, longer than the leaves; *stem* sarmentose.

Pentaphyllum vulgatissimum, *Raii Syn.* 255, 1; *Park.* 398.
Quinquefolium vulgare, *Ger. em.* 987, 1.
Potentilla reptans, *Lin. S. P.* 714.
Five-finger grass. Five-leaved grass. Sinkfield.

Fields and pastures; perennial; July and August.

Stem reddish; *leaves* bald above, beneath hairy on the ribs; *stipules* lanceolate, sometimes slightly toothed; *petals* reverse heartshape, as long as the calyx; *bracteæ* lanceolate, equal to the calyx-lobes.—Root astringent, antiseptic, used as a gargle for loose teeth and spongy gums.

d. *Leaves three-leafletted.*

11. *Potentilla nemoralis.* *Grove cinquefoil.*

Leaves three-leafletted; stem-leaves petioled; leaflets wedgeshape, reverse oval, deep toothed; *peduncles* solitary, long; *flowers* 4-petaled; *stem* threadlike, procumbent.

Tormentilla reptans, *Lin. S. P.* 716.
Potentilla procumbens, *Sibthorp Fl. Ox.* 162.
Potentilla nemoralis, *Niestler Potentillæ*, 65.
Plot's tormentil. Trailing tormentil.

Edges of fields; perennial; June and July.

Stem slender; *stipules* lanceolate, generally undivided; *bracteæ* linear, lanceolate; *calyx-lobes* ovate, equal; *petals* wedgeshape, reverse heartshape, nearly twice as long as the calyx, sometimes 5.

12. *Potentilla officinalis.* *Shop cinquefoil.*

Leaves 3-leafletted; stem-leaves sessile; leaflets rather lanceolate, oval, deeply toothed; *peduncles* single, from the fork or lateral; *flowers* 4-petaled; *stem* mostly upright, forked.

Tormentilla, *Raii Syn.* 257; *Ger. em.* 992.
Tormentilla vulgaris, *Park.* 394.
Tormentilla erecta, *Lin. S. P.* 716.
Tormentilla officinalis, *Curtis Fl. Lond.*
Potentilla Tormentilla, *Sibthorp Fl. Oxon.* 162.
Common tormentil. Septfoil.

Barren pastures and meadows; perennial; June and July.

Root woody; *stem* upright or procumbent; *leaves* nearly sessile; *petals* and *calyx-lobes* 4, rarely 3, 5, or many.

13. *Potentilla tridentata.* *Three-toothed cinquefoil.*

Leaves 3-leafletted; leaflets oblong, wedgeshape, 3-toothed at the tip, bald above; panicle weak; petals oval, larger than the calyx; *stem* upright.

Potentilla tridentata, *Aiton Hort. Kew.* 216.
Potentilla retusa, *Retz Prod. Fl. Scand.* 2, 642.

Alpine rocks; perennial; May and June.

Stem 6 in. high, downy; *leaflets* blunt, 3 or 5-toothed at the tip; uppermost lanceolate, generally not cut; *flowers* small; *calyx-lobes* oval, shorter than the petals; *receptacle* hairy.

14. *Potentilla fragarioides.* *Strawberry cinquefoil.*

Leaves 3-leafletted; leaflets reverse oval, retuse, deeply serrated, silky; *petals* reverse heartshape, as long as the calyx; *stem* threadshape, lying down.

Fragaria sterilis, *Raii Syn.* 254, 3; *Lin. S. P.* 709.
Fragaria minime vesca seu sterilis, *Ger. em.* 998.
Fragaria minime vesca, *Park.* 758.
Potentilla Fragaria, *Poiret Encycl.* 5, 599.
Potentilla fragarioides, *Villars Delph.* 3, 561.
Potentilla prostrata, *Mœnch Meth.* 660.
Comarum fragarioides, *Roth Germ.* 2, 577.
Potentilla fragariæfolia, *Gmel. Bad.* 2, 453.
Fragaria præcox, *Salisb. Prod.* 363.
Barren strawberry. Wild strawberry.

Dry barren pastures; perennial; March and April.

Root woody; *stem* diffused; *flowers* white.

V. 357. FRAGARIA. Pliny. *Strawberry.*

Calyx-tube concave; *petals* 5; *stamens* many; *ovaries* many, indefinite, capitate on a prominent receptacle; *styles* lateral; *akenia* rather drupaceous, spread over the outer surface of the deciduous, fleshy receptacle.

1. *Fragaria vesca.* *Eatable strawberry.*

Calyx in fruit reflected; *hairs* of the petioles very much turned back, of the peduncles pressed close.

Fragaria, *Raii Syn.* 254, 1; *Ger. em.* 997, 1 and 2.
Fragaria vulgaris, *Park.* 758.
Fragaria vesca, *Lin. S. P.* 708.

Woods and hedges, also cultivated; peren.; May, June.

Roots fibrous; runners rooting; *stem* upright; *leaves* equally serrated; *petals* shorter than the calyx; *flowers* rather corymbose; *fruit* red, drooping.—Bark of the root

astringent; fruit fragrant, juicy, universally esteemed, particularly praised as of use in consumption, gravelly complaints, and incrustations on the teeth.

β. *muricata.* *Flower* greenish; *receptacle* hard; *akenia* ending in a point.

Fragaria fructu hispido, *Raii Syn.* 254, 2; *Ger. em.* 998, 2.

γ. *alba.* *Fruit* white.

2. *Fragaria elatior.* *Tall strawberry.*

Calyx in fruit reflected; *hairs* of the peduncle and petioles very spreading.

Fragaria vesca pratensis, *Lin. S. P.* 708.
Fragaria elatior, *Willd. S. P.* 1091.
Fragaria magna, *Thuill. Paris.*
Fragaria moschata, *Duchesne Monogr.*
Fragaria dioica, *Ibidem.*
Hautbois.

Woods, also cultivated; perennial; June to October.

Plant often dioicous; *fruit* large; odour like musk, in high esteem.

VI. 358. RUBUS. Pliny. *Bramble.*

Calyx flat at bottom; *petals* 5; *stamens* many; *ovaries* capitate, on a manifestly protuberant receptacle; *styles* nearly terminal; *akenia* rough, covered with a fleshy sarcocarp, on a fleshy receptacle.

a. Chamæmorus. *Stem herbaceous, unarmed, mostly simple.*

1. *Rubus nubis.* *Cloud bramble.*

Stem unarmed, simple, 1-flowered; *leaves* simple, lobed; *calyx-lobes* ovate.

Chamæmorus, *Raii Syn.* 260, 1; *Ger. em.* 1273, 4; *Park.* 1014.
Vaccinium nubis, *Ger. em.* 1420.
Rubus Chamæmorus, *Lin. S. P.* 708.
Cloud-berry. Knot-berry. Knought-berry.

Alpine bogs; perennial; June.

Root creeping; *leaves* heartshape, 5-lobed, bald; *flower* white; *fruit* dark-red; *akenia* many.—Fruit acid, antiscorbutic, eaten raw or in tarts.

2. *Rubus arcticus.* *Arctic bramble.*

Stem unarmed, simple, 1-flowered; *leaves* ternate, bald.

Rubus arcticus, *Lin. S. P.* 708.

Alpine rocks; perennial; May and June.

Root creeping; *runners* 0; *stem* angulate; *leaves* unequally serrated; *flowers* peduncled, dark rose-coloured; *fruit* purple.—Fruit is made in Sweden into a rich sweetmeat, or fine-flavoured wine.

3. *Rubus saxatilis.* *Stone bramble.*

Stem unarmed, simple; *runners* creeping; *leaves* ternate, nearly bald; *panicle* few-flowered.

Chamæmorus quæ Chamærubus saxatilis, *Raii Syn.* 261, 2.
Rubus saxatilis, *Ger. em.* 1278, 4; *Lin. S. P.* 708.
Rubus alpinus saxatilis, *Park.* 1014.

Alpine shady places; perennial; June.

Root fibrous; runners or barren stems hairy; *leaves* pale-green, thin, doubly serrated; lower leaves sometimes in fives; side leaflets sessile; *flowers* 3 or 4; petals white, lanceolate; *fruit* red; *akenia* 3 or 4, very fleshy.—Fruit rather astringent, yet pleasant.

b. Rubus. *Stem shrubby, armed; runners bending down, rooting at the end; leaves digitate.*

4. *Rubus fruticosus.* *Shrubby bramble.*

Stem angular, prickly; prickles hooked; *leaves* generally in fives; leaflets woolly beneath, petioled; *calyx-lobes* turned back.

Rubus major fructu nigro, *Raii Syn.* 467, 1.
Rubus vulgaris major, *Park.* 1013.
Rubus, *Ger. em.* 1269, 1.
Rubus fruticosus, *Lin. S. P.* 707.
Common bramble. Blackberry.

Woods and hedges; shrubby; July and August.

Stem woody, tough, divaricating; angles prickly; prickles dilated at bottom, compressed, conical; *leaves* in threes or fives; leaflets blunt with a point, dark green, rough; *panicle* racemose, many-flowered; *petals* white.—Fruit rather acid, but eats well with wine.

5. *Rubus corylifolius.* *Hazel-leaved bramble.*

Stem roundish, diffused, prickly; prickles placed promiscuously, straight; *leaves* usually in fives; leaflets ovate, rather hairy; side-leaflets sessile.

Rubus corylifolius, *Smith Fl. Brit.* 542.
Rubus fruticosus major, *With. Bot. Arr.* 469.

Hedges; shrubby; July.

Stem very long, procumbent, brittle; prickles slender, unequal; *leaves* in threes or fives; leaflets wrinkled, soft beneath; *panicle* weak; *corolla* white; *fruit* blackish violet; *acini* rounded.

6. *Rubus cæsius.* *Blue bramble.*

Stem roundish, prostrate, glaucous; *prickles* placed promiscuously; *leaves* ternate, hairy beneath; lateral leaflets two-lobed.

Rubus minor fructo cæruleo, *Raii Syn.* 467, 3.
Rubus repens fructo cæsio, *Ger. em.* 1271, 2.
Rubus minor, Chamærubus sive Humirubus, *Park.* 1013.
Rubus cæsius, *Lin. S. P.* 706.
Dewberry.

Woods and edges of fields; shrubby; June and July.

Leaves deeply serrated, not woolly beneath; side-leaflets sessile, mostly lobed; *panicle* few-flowered; *calyx* spread; *petals* white; *fruit* dark glaucous; *acini* few, large.

c. Idæus. *Stem upright, armed, shrubby; leaves pinnate.*

7. *Rubus suberectus.* *Upright bramble.*

Stem upright; *prickles* scattered, soft, nearly straight; *leaves* in fives or sevens, pinnate; upper leaves ternate; leaflets ovate, hairy beneath.

Rubus suberectus, *Anderson Lin. Trans.* 11, 218.
Rubus Nessensis, *W. Hall, Tr. R. Edinb. Soc.* 3, 20.

Woods in the north; shrubby; June.

Stem nearly upright, brittle, much branched, divaricating, prickly; prickles scattered, rarely very few; leaflets pointed at the tip, light green, bald above; *panicle* long; *corolla* white, large; *fruit* reddish black; *acini* many.—Fruit very agreeable.

8. *Rubus Idæus.* *Ida bramble.*

Stem upright, prickly; *leaves* in fives, pinnate; upper leaves ternate; leaflets rhomboid-ovate; tomentose beneath; *petioles* channelled.

Rubus Idæus spinosus fructu rubro, *Raii Syn.* 467, 4.
Rubus Idæus, *Ger. em.* 1269, 2; *Park.* 557; *Lin. S. P.* 706.
Rasp-berry. Hind-berry. Framboise.

Moist woods and hedges, also cultivated; shrubby; May and June.

Stem upright, round, aculeately hispid; *leaflets* pointed, unequally serrated; *corolla* white, small; *fruit* odorous, blood-coloured.—Fruit used in deserts, and to flavour tarts, wines, and spirits.

β. *albus*. *Fruit* white.

Fam. XXVI. 61. ULMARIÆ.

Calyx free, persisting, 5-parted; *petals* inserted on the calyx, mostly 5; *stamens* indefinite, inserted under the petals; *ovaries* free, definite, 1-styled; *capsules* or *camares* as many as the ovaries, 1 or many-seeded; *perisperm* 0; corculum straight; radicle above.—*Leaves* alternate.

359. SPIRÆA. Theophrastus. *Spiræa.*

Calyx spreading, 5-cut; *petals* 5; *ovaries* 3 to 12; *capsules* 1-celled, 2-valved; *seeds* 1 to 3, on the inner suture of the capsules.

a. Spiræa. *Stem shrubby.*

1. *Spiræa salicifolia.* *Willow-leaf spiræa.*

Leaves oblong, serrated, bald; *racemes* twice-compounded.

Spiræa Theophrasti, *Ger. em.* 1601.
Spiræa salicifolia, *Lin. S. P.* 700.
Mock willow.

Damp woods and hedges; shrub; July.

Stem 4 feet high; branches stiff, bald; *leaves* alternate, bald on both sides; *racemes* solitary, upright; *bracteæ* linear, solitary; *flowers* reddish white.

b. Filipendula. *Stem herbaceous; camares* 12, *in a circle.*

2. *Spiræa vulgaris.* *Common spiræa.*

Leaves interruptedly pinnate; leaflets uniform, ovate, oblong, serrated, bald; *flowers* panicled, corymbose.

Filipendula, *Raii Syn.* 259, 1; *Ger. em.* 1058, 1; *Park.* 434.
Spiræa Filipendula, *Lin. S. P.* 702.
Common dropwort. Filipendula.

Chalky or sandy pastures; perennial; July.

Root woody, tuberculous; tubercles elliptical; *stem* 12 in. high; *flowers* many, yellowish or reddish white.—*Tubercles* nutritive.

β. *plena*. *Flowers* double.

c. Ulmaria. *Stem herbaceous; camares* 6 *or* 8, *twisted.*

3. *Spiræa odorata.* *Odorous spiræa.*

Leaves interruptedly pinnate, tomentose beneath; terminal leaflets 3-lobed; side leaflets undivided; *corymbus* proliferous.

Ulmaria, *Raii Syn.* 259, 1.
Regina prati, *Ger. em.* 1043, 1.
Ulmaria vulgaris, *Park.* 592.
Meadow sweet. Mead sweet. Queen of the meadows.

Damp fields and pastures; perennial; June and July.

Root fibrous; *stem* 4 feet high; *flowers* white, small, odoriferous.

Fam. XXVII. 62. DRUPACEÆ. *Rosacearum pars*, Jussieu.

Calyx free, persisting, 5-cut; *petals* 5, inserted on the calyx; *stamen* indefinite, on the calyx under the petals; *ovary* simple, free, 1-styled; *fruit* a drupe, nut 1 or 2-seeded; *seeds* pendulous from the side; perisperm very thin, fleshy; radicle above; corculum straight. — *Stem* woody; *leaves* simple, glandular at bottom or on the petiole; *flowers* compleat, hermaphrodite.

Drupe not glaucous; *nut* globular ..... Cerasus. 360.
Drupe glaucous; *nut* ovate, pointed .... Prunus. 361.

I. 360. CERASUS. Theophrastus. *Cherry.*

Drupe fleshy, globose, bald, rather furrowed on one side, not covered with a glaucous pollen; *nut* smooth, globular, with a rather prominent angle on one side.

a. Padus. *Leaves deciduous; petiole glandular; flowers racemose.*

1. *Cerasus racemosa.* *Racemose cherry.*

Leaves ovate, lanceolate, deciduous, bald, doubly serrate; *petioles* with 2 glands at the base; *flowers* racemose; *racemes* pendulous.

Cerasus avium nigra et racemosa, *Raii Syn.* 463, 1; *Ger. em.* 1504, 9.
Cerasus avium rubra, *Ger. em.* 1504, 10.
Cerasus avium racemosa, *Park.* 1517.
Prunus Padus, *Lin. S. P.* 677.
Cerasus Padus, *De Candolle Fl. Gall.* 3781.
Wild cluster cherry. Bird cherry. Hegberry tree.

Woods and hedges; tree; May.

Leaves petioled, veiny, odour like rue; *racemes* single, from the base of the young leaves; *flowers* white; petals finely serrated; *drupe* black; (*nut* with cavities on the outside, Stokes).—Bark in decoction used to cure the venereal disease; fruit nauseous, but gives an agreeable flavour to wine and brandy, a decoction of the fruit used in dysentery.

b. Cerasus. *Leaves deciduous; flowers umbelled.*

2. *Cerasus hortensis.* *Garden cherry.*

Umbells few-flowered, peduncled; *leaves* ovate, lanceolate, bald, doubled together.

Cerasus sylvestris fructu rubro, *Raii Syn.* 463, 1.
Prunus avium, *Lin. S. P.* 680.
Prunus Cerasus, *Withering Bot. Arr.* 507.
Wild cherry.

Woods, also cultivated; tree; April to June.

Petioles with 1 or 2 glands near the end, sometimes 0; *leaves* with the lowermost teeth on one and sometimes both sides glandular; *drupe* red.—Fruit of the cultivated varieties esculent, but generally difficult of digestion; wood close grained; gum differs in chemical qualities from that called gum Arabic, but is equally nutritive.

β. *parva.* *Drupe* heartshape, small, red.

Cerasus sylvestris fructu minimo cordiformi. *Raii Syn.* 463, 3.
Prunus Cerasus β, *Smith Fl. Brit.* 527.

γ. *acidula.* *Drupe* round, red, tart, flesh easily separable from the nut.

Prunus Cerasus aproniana, *Lin. S. P.* 679.
Cerasus vulgaris, *Ger. em.* 1502, 1.
Kentish cherry.

δ. *majalis.* *Leaves* when young downy underneath along the main and large ribs; *drupe* round, uniformly red, flesh easily separable.

May duke cherry.

ε. *cordiformis.* *Drupe* heartshape, white and red; flesh whitish, adhering to the nut.

Cerasus Hispanica, *Ger. em.* 1502, 3.
Cerasus Hispanica, sive alba, *Park. Par.* 573, 3.
Prunus cerasus dulcis, *Lin. S. P.* 679.
White heart cherry.

ζ. *nigra.* *Drupe* heartshape, reddish black; flesh blackish red, very sweet.

Cerasus cordata, *Park. Par.* 573.
Black heart cherry. Small la cœur or heart cherry.

η. *serotina.* *Drupe* roundish, blackish red, austere.

Cerasus sylvestris septentrionalis fructu parvo serotino, *Raii Syn.* 463, 4?
Prunus cerasus austera, *Lin. S. P.* 679.
Morello cherry.

3. *Cerasus avium.* *Bird cherry.*

Umbells sessile; *leaves* ovate, lanceolate, downy beneath.

Cerasus sylvestris fructu nigro, *Raii Syn.* 463, 2.
Cerasus nigra, *Ger. em.* 1505, 11.
Prunus avium, *Sibthorp Fl. Ox.* 154.
Prunus Cerasus avium, *Huds. Fl. Angl.* 213.
Black cherry. Mazzards. Gee.

Woods and hedges, also cultivated; tree; April.

Fruit ovate, blackish, sweet.

β. *major.* *Drupe* large, finer flavoured.

Prunus cerasus ε, *Smith Fl. Brit.* 527.
Coroun cherry. Carrons.

II. 361. PRUNUS. Pliny. *Plum.*

Drupe fleshy, bald, furrowed on one side, covered with a glaucous pollen; *nut* ovate, oblong, compressed, rough; edge furrowed angularly; tip pointed.

1. *Prunus spinosa.* *Thorny plum.*

Branches ending in spines; *leaves* elliptical, lanceolate; *peduncles* solitary; *fruit* upright, roundish.

Prunus sylvestris, *Raii Syn.* 462, 1; *Ger. em.* 1497, 5; *Park.* 1033.
Prunus spinosa, *Lin. S. P.* 681.
Black thorn. Sloe.

Woods and hedges; shrubby; March and April.

Branches divaricating; *flowers* white, appearing before the leaves are expanded; *drupe* black.—Root spreads wide; wood, hard, tough; thorns produce unpleasant wounds; leaves when young used to reduce the price of tea; fruit rather acid, very rough; bark may be used for the Peruvian; flowers in infusion purgative; juice of the fruit serves to mark linen with an indelible stain.

2. *Prunus insititia.* *Foreign plum.*

Branches mostly ending in a spine; *leaves* lanceolate, ovate, convolute, villous beneath: *peduncles* rarely solitary; *drupe* roundish.

Prunus sylvestris major, *Raii Syn.* 462, 2.
Prunus insititia, *Lin. S. P.* 680.
Prunus communis insititia, *Huds. Fl. Ang.* 212.
Black bullace. Black bullesse.

Woods and hedges, also cultivated; tree; April.

Leaves narrow at bottom; *petals* white, reverse ovate; *drupes* solitary.—Fruit eatable, but inferior in flavour, is rendered better by exposure to frost.

β. *alba.* *Drupe* whitish yellow; *plant* small.

Prunus sylvestris fructu majore albo, *Raii Syn.* 462, 3.
White bullace. *White bullesse.*

γ. *rubra.* *Drupe* red, austere.

Prunus sylvestris fructu rubro, acerbo et ingrato, *Raii Syn.* 462, 4.

3. *Prunus domestica.* *Home plum.*

Branches unarmed, spreading; *leaves* ovate, lanceolate, hirsute beneath; *peduncles* solitary; *drupe* ovate, spherical.

Prunus domestica, *Ger. em.* 1497, 1; *Lin. S. P.* 680 β.
Prunus, *Park.* 1512.
Damson. *Damascus plum.* *Damask prune.*

Woods and hedges; also cultivated; tree; April.

Leaves serrated; *peduncles* short, sometimes in pairs or threes; drupe dark purple.—*Fruit* austere, used chiefly in pastry; also to make an acerb wine, which serves to reduce or imitate port wine.

Many varieties of this species are cultivated, differing in the size, shape, and colour of the fruit, and in its flavour: this fruit is peculiarly apt to induce the cholera morbus.

Fam. XXVIII. 63. LEGUMINOSÆ. Jussieu.

Calyx 1-leaved, mostly 5-cut, free; *corolla* inserted on the calyx; petals usually 5, irregular, papilionaceous; upper petal (vexillum or standard) covering the others, 2 side petals (wings) and the two lower (keel) mostly soldered together; *stamens* usually 10; monadelphous; or diadelphous, 9 on an androphore and 1 single; *ovary* free; *style* 1; *legumen* 2 valved, 1 or 2-celled; *seed* affixed on one of the sutures; perisperm 0; radicle inclining to lobes; cotyledons thick, sometimes carried up in germination unchanged and distinct from the seminal leaves.—*Stem* shrubby or herbaceous; *leaves* alternate, mostly pinnate, or ternate, rarely 0; leaflets sometimes sleep at night; *stipules* axillary.

a. *Stamens monadelphous; leaves simple, ternate, or pinnate with an odd leaflet.*

Cal. deeply 2-cut; lobes keeled at bottom; *legumen* scarcely longer than the calyx ..... ULEX. 362.

Cal. 2-lipped, 2 and 3-toothed; *keel* decumbent, not enclosing the stamens and style GENISTA. 363.

Cal. 5-cut, bellshape; *standard* striated; *legumen* rhomboidal, sessile ..... ONONIS. 364.

Cal. 5-toothed, mouth contracted, middle swoln; *legumen* small, 1 or 2-seeded ... ANTHYLLIS. 365.

b. *Stamens diadelphous; leaves ternate, or pinnate with an odd leaflet.*

Cal. tubular, 5-toothed; *keel* simple; *wings* short; *legum.* 12-seeded; *flow.* in heads ..... TRIFOLIUM. 366.

Cal. tubular; 5-toothed; *keel* simple; *wings* short; *legum.* longer than the calyx; *flowers* racemous ..... MELILOTUS. 367.

Cal. tubular, 5-cut; *keel* remote from standard; *legumen* curved or spiral .... MEDICAGO. 368.

Cal. tubular, 5-cut; *wings* and *stand.* connivent; *legumen* round; *stipules* leaflike ..... LOTUS. 370.

Cal. bellshape, 5-cut; *keel* very small; *wings* and *stand.* spreading; *legum.* compressed, peduncled, many-seeded .... TRIGONELLA. 369.

Cal. 2-lipped; upper lip 4-cut, equal; lower simple, linear; *keel* 2-petaled; *leg.* ovate, 3 to 6-seeded ..... GLYCYRRHIZA. 371.

c. *Stamens diadelphous; legumen 2-celled; leaves pinnate with an odd leaflet.*

Cal. 5-cut; *keel* pointed; *legumen* 2-celled; upper suture bent inwards ... OXYTROPUS. 372.

Cal. 5-cut; *keel* blunt; *legumen* 2-celled; lower suture bent inwards .. ASTRAGALUS. 373.

d. *Stamens diadelphous; legumen 1-celled; leaves abruptly pinnate, main petiole ending in a tendril or thread.*

Style above flat, villous ..... LATHYRUS. 374.

Style above keeled, villous ..... PISUM. 375.

Style linear, slender, hairy at the tip ... OROBUS. 376.

Style bearded beneath the stigma ..... VICIA. 377.

e. *Stamens diadelphous; legumen many-celled; cells* 1-*seeded, not opening spontaneously.*

Legumen cylindrical, bent ..... ORNITHOPUS. 378.
Legumen compressed, bent, membranaceous, one suture deeply toothed .... HIPPOCREPIS. 379.
Legumen compressed, prickly; *keel* very blunt; *wings* very short ..... ONOBRYCHIS. 380.

A. *Stamens* monadelphous.

I. 362. ULEX. Pliny. *Furze.*

Calyx deeply 2-parted; lobes keeled, scaly at the base; *corolla-keel* 2 petaled; *stamens* monadelphous; *androphore* tubular, cut above; *legumen* turgid, scarcely longer than the calyx, few-seeded.—*Stem* undershrubby, very spinous; *leaves* simple, lanceolate; *flowers* axillary, yellow.

1. *Ulex Europæus.* *European furze.*

Twigs upright; *leaves* lanceolate, linear, villous; *bracteæ* ovate, weak; *calyx-teeth* very small, connivent.

Genista spinosa vulgaris, *Raii Syn.* 475, 1; *Ger. em.* 1319.
Genista spinosa major vulgaris, *Park.* 1003.
Ulex Europæus, *Lin. S. P.* 1045.
Ulex grandiflorus, *Pour. Mem. Thoul.* 333, 3.
Common furze. Whins. Gorse. Thorn broom.

Dry heaths, also cultivated; shrub; all the year, chiefly in May.

Branches very close, tangled; spines very sharp, evergreen; *peduncles* solitary, 1-flowered; *corolla* golden-yellow, odour like honey; *legumen* 4-seeded.—Young shoots bruised used to feed sheep and cattle; also cut for fuel, and to light fires of fossil coals.

2. *Ulex nanus.* *Dwarf furze.*

Twigs decumbent; *leaves* linear, bald; *bracteæ* very small, pressed close to the stem; *calyx-teeth* lanceolate, distant.

Genista spinosa minor, *Raii Syn.* 475, 2; *Park.* 1003.
Genista aculeata minor, *Ger. em.* 1321, 6.
Ulex Europæus β, *Lin. S. P.* 1045.
Ulex nanus, *Forster in Sym. Syn.* 160.
Ulex minor, *Roth Fl. Germ.*
Scorpion furze.

High heaths; shrubby; August and September.

Plant much smaller than U. Europæus; *legumen* hairy.

II. 363. GENISTA. *Broom.*

Calyx 2-lipped; upper lip 2-toothed, lower 3-toothed; *standard* oblong, turned back; keel lying down, not entirely covering the stamens and pistils; *stamens* monadelphous; *legumen* oblong.—*Stem* shrubby; *leaves* simple or ternate; *stipules* scarcely any; *flowers* yellow.

a. Spartium. *Branches unarmed.*

1. *Genista vulgaris.* *Common broom.*

Leaves oblong, ternate or solitary; *branches* stiff, angular; *flowers* axillary; peduncles short; *legumen* many-seeded; edge hairy.

Genista anguiosa trifolia, *Raii Syn.* 474.
Genista, *Ger. em.* 1311, 1.
Genista vulgaris, et Scoparia, *Park.* 228.
Spartium Scoparia, *Lin. S. P.* 996.

Fields and dry woods; shrubby; May and June.

Branches evergreen, bald; *leaves* small, bald; *flowers* solitary, drooping, large; *corollæ* gold or citron-yellow.—Tops and seeds in infusion diuretic, serviceable in dropsy; seeds roasted substituted for coffee; young flowers pickled for sauce; ashes afford a tolerably pure subcarbonate of potash; when sheep are pastured on it in bloom the rot is prevented; twigs used for carpet-brooms, and their bark may be made into flax.

2. *Genista tinctoria.* *Dyeing broom.*

Branches round, streaked, upright, unarmed; *leaves* lanceolate, bald; *flowers* racemose; *legumen* bald, roundish, many-seeded.

Genistella tinctoria, *Raii Syn.* 474, 1; *Ger. em.* 1316, 1; *Lin. S. P.* 998.
Genista tinctoria vulgaris, *Park.* 228.
Base broom. Dyers weed. Green weed. Wood-waxen.

Pastures and woods; shrubby; July and August.

Root woody; branches ascending; *leaves* sessile, slightly hairy on the edge; *flowers* axillary; *calyx* angular.—Plant in decoction diuretic; seeds purgative; flowers dye wool yellow.

3. *Genista pilosa.* *Hairy broom.*

Stem tubercled, decumbent, unarmed; *leaves* lanceolate, folded, blunt, hairy beneath; *flowers* axillary, nearly sessile; *calyx*, *corolla*, and *legumen* hairy, hairs silklike.

Chamægenista Pannonica, *Ger. em.* 1313, 6.
Genista pilosa, *Lin. S. P.* 999.

High sandy fields; shrubby; May.

Root woody; *stem* streaked; *leaves* in bundles, petioled; *legumen* compressed, 2 or 3-seeded.

b. *Branches spinous.*

4. *Genista Anglica.* *English broom.*

Leaves ovate, bald; *spines* simple and compound; *flowering branches* spineless; *flowers* axillary, solitary, nearly racemose; *corolla* and *legumen* bald.

Genista minor aspalathoides, sive Genista spinosa Anglica, *Raii Syn.* 475, 1.
Genista aculeata, *Ger. em.* 1320, 4.
Genistella aculeata, *Park.* 1004.
Genista Anglica, *Lin. S. P.* 999.
Needle furze. *Petty whin.*

Spongy heaths; shrubby; May and June.

Root woody; *stem* ascending; spines spreading, awlshape; *leaves* pointed; *flowers* citron; standard gold-colour; *legumen* turgid, many-seeded.

III. 364. ONONIS. Theophrastus. *Rest-harrow.*

Calyx bellshape, 5-cut, lobes linear; *standard* striated; *stamens* monadelphous; *legumen* inflated, sessile, few-seeded.—*Leaves* ternate, leaflets slightly serrated; *stipules* joined to the petiole; *flowers* (in the English species) axillary, sessile, purplish.

1. *Ononis arvensis.* *Fallow rest-harrow.*

Stem villous, ascending; *twigs* grow spinous; *leaves* often simple, not in the least cut at bottom; *flowers* nearly sessile, solitary or in pairs.

Ononis arvensis, *Lightfoot Fl. Scot.* 386.

Barren pastures and waysides; perennial;

Root black; *stem* annual, leafy; *branches* villous; *lower leaves* ternate; leaflets ovate, rather viscid.

β. *repens.* *Branches* villous; *leaves* round, serrate.

Anonis procumbens maritima nostras foliis hirsutis pubescentibus, *Raii Syn.* 332, 3.
Ononis repens, *Lin. S. P.* 1006.

γ. *antiquorum.* *Branches* nearly smooth; *flowers* solitary, larger than the leaves.

Ononis arvensis β, *Smith Fl. Brit.* 758.

δ. *spinosa.* *Stem* hairy, hairs brown; *leaves* rather bald; *flowers* in pairs larger than the leaves.

Anonis spinosa, flore purpureo, *Raii Syn.* 332, 1; *Park.* 994.
Anonis sive Resta bovis, *Ger. em.* 1322, 1.
Ononis spinosa, *Lin. Syst. Veg. ed.* 14, 651.
Cammock. Ground furze. Rest harrow.

Roots in decoction recommended in gravelly complaints.

ε. *inermis. Branches* hairy; spines 0; *flowers* in pairs, shorter than the leaves.

Anonis non spinosa purpurea, *Raii Syn.* 332, 2.

Odour like a goat, but not the O. hircina of Jacquin.

IV. 365. ANTHYLLIS. Dioscorides. *Kidney-vetch.*

Calyx ovate, oblong, inflated in the middle, persisting, 5-toothed, mouth connivent; *stamens* monadelphous; *legumen* small, 1 or 2-seeded, closed up in the persistent calyx. —*Flowers* yellow, in heads; *leaves* pinnate.

Anthyllis leguminosa. *Podded kidney-vetch.*

Stem herbaceous; *leaves* lyrately pinnate, leaflets not in the least cut; *head* terminal, double.

Vulneraria rustica, *Raii Syn.* 325, 1.
Anthyllis leguminosa, *Ger. em.* 1240, 1.
Anthyllis leguminosa vulgaris, *Park.* 1393.
Anthyllis vulneraria, *Lin. S. P.* 1012.
Ladies finger.

Chalk and sandy pastures; perennial; July and August.

Root woody; *stem* hairy; hairs close to the stem; *leaves* glaucous, hairy underneath; *head* many-flowered, bracteolated; bracteæ palmate; *calyx* white, hairy; *corolla* gold yellow.

β. *coccinea. Flowers* scarlet.

Vulneraria supina, flore coccineo, *Dillen in Raii Syn.* 325, 2.

B. Trifoliatæ. *Cotyledons* always rising out of the earth, mostly formed like seed-leaves; *leaves* ternate, or pinnate with an odd one; *stamens* diadelphous; *legumen* 1-celled.

V. 366. TRIFOLIUM. Pliny. *Trefoil.*

Calyx persisting, tubular, 5-toothed; *keel* simple, shorter than the wings or standard; *legumen* very small, 1 or 2-seeded, covered with the calyx.—*Leaves* ternate; *flowers* in heads.

a. Trifoliastrum. *Calyx bald, not inflated after flowering; legumen 2 or 4-seeded, covered with the calyx; root perennial; flowers white or reddish.*

1. *Trifolium repens.* *Creeping trefoil.*

Head umbelled; *legumen* 4-seeded; *calyx-teeth* unequal; *leaflets* ovate, oblong, nicked, finely serrate; *stem* creeping.

Trifolium pratense album, *Raii Syn.* 327, 1; *Park.* 1110.
Trifolium pratense, *Ger. em.* 1185.
Trifoliastrum, *Micheli Nov. Gen.* 25, 3.
Trifolium repens, *Lin. S. P.* 1080.
Meadow trefoil. White Dutch clover. Shamrock.

Fields and pastures; perennial; May to September.

Stem prostrate; *petioles* long; *leaves* often spotted with brown and white; *peduncles* long, upright; heads become pendulous; *calyx* 10-ribbed.—Considered as indicating a rich soil.

β. *quinatum.* *Leaflets* 4 or 5, dark brown.

γ. *sanguineum.* *Leaflets* deep purple.
Bloodwort.

δ. *carneum.* *Flowers* flesh-colour.

ε. *proliferum.* *Flowers* bearing a small head of leaves.

ζ. *hybridum.* *Stem* ascending, branchy; *calyx-teeth* unequal.

Trifolium repens hybridum, *Hudson Fl. Angl.*
Trifolium hybridum, *With. B. Arr. ed.* 3 and 4, not of Linnæus.

Differs from T. hybridum of Linnæus by its calyx-teeth.

b. *Calyx bald, not inflated after flowering; flowers white or reddish; legumen 1-seeded; root annual.*

2. *Trifolium glomeratum.* *Globe trefoil.*

Head spherical, axillary and terminal, sessile; *calyx-teeth* unequal, heartshape, reflected, venose, awned, spread; *leaflets* reverse ovate, finely serrated; *legumen* 1-seeded.

Trifolium cum glomerulis ad caulium nodos rotundis, *Raii Syn.* 329, 10.

Sandy fields and pastures; annual; July.

Stem prostrate, striated; *leaves* distant; *stipules* ovate, scarious; *head* hemispherical, many-flowered; *calyx* bell-shape, pale, teeth half as long as the tube, reflected; *corolla* rose-colour.

3. *Trifolium suffocatum.* *Buried trefoil.*

Head roundish, sessile, lateral and terminal; *calyx-teeth* lanceolate, acute, recurved, longer than the corolla; *legumen* 2-seeded.

Trifolium minimum supinum, *Raii Hist. Pl.* 1, 992.
Trifolium suffocatum, *Lin. Mant.* 2, 276.

Sandy sea-shores; annual; June and July.

Stem short, tortuous; *petioles* long; *leaflets* blunt; *stipules* membranaceous, broad, divaricating; *flowers* sessile, glomerated; *corolla* white.—Leaves alone appear above the sand.

c. *Calyx villous or hirsute, not inflated after flowering; corolla-tube very long; standard deciduous; flowers white or reddish; fruit covered with a hardened central involucrum.*

4. *Trifolium subterraneum.* *Underground trefoil.*

Head villous, 4 or 5-flowered; *coma* or *involucrum* central, reflected, stiff, stellate, covering the fruit.

Trifolium pumilum supinum, flosculis longis albis, *Raii Syn.* 327, 2.
Trifolium subterraneum, *Lin. S. P.* 1080.

Sandy and gravelly places; annual; May.

Stem prostrate, depressed, spreading; *leaves* hairy; *stipules* ovate, lanceolate; *peduncles* in fruit deflected into the ground; *calyx* tubular; teeth hairlike, nearly equal; *corolla* slender, white; *legumen* 1-seeded.

d. Trifolium. *Calyx villous or hirsute, not inflated after flowering; corolla* 1*-petaled; flowers spiked, perennial.*

5. *Trifolium pratense.* *Meadow trefoil.*

Spike close, ovate; four of the calyx-teeth equal; *corolla* unequal; *stipules* ovate, awned; *leaflets* ovate, scarcely cut; *stem* ascending.

Trifolium pratense purpureum, *Raii Syn.* 328.
Trifolium pratense, *Lin. S. P.* 1082.
Marle grass. Purple clover. Honeysuckle trefoil.

Fields and pastures; perennial; May to September.

Stem rather branchy; *leaves* nearly bald, ribs purplish and anastomosing near the margin; *spike* solitary, sessile; *calyx* 10-ribbed; *standard* longer than the wings.

β. *sativum.* *Stems* many, large, more upright; *leaflets* oblong, oval, hairy; *peduncles* mostly in pairs.

Broad clover.

γ. *album.* *Flowers* cream-colour.

6. *Trifolium medium.* *Middle-size trefoil.*

Spike open, nearly globular, solitary; 3 lower teeth of the calyx longest, shorter than the corolla; *stipules* awl-shape; *leaflets* elliptic, very finely serrated; *stems* branchy, bent.

Trifolium medium, *Lin. Fl. Suec.* 558.
Trifolium flexuosum, *Jacquin Aust.* 386.
Trifolium alpestre, *Hudson Fl. Angl.* 326, not of Jacquin.
Zigzag trefoil.

Clalky and clayey pastures; perennial; July.

Leaves rather glaucous beneath, edge hairy; propagates itself by the root.—Cattle not fond of it until the frost has affected it.

7. *Trifolium incarnatum.* *Flesh-colour trefoil.*

Spike oblong, villous, blunt, leafless; *leaflets* roundish, reverse heartshape, ovate, crenated, villous.

Trifolium pratense purpureum minus foliis cordatis, *Dillen in Raii Syn.* 328, 5.
Trifolium incarnatum, *Willd. S. P.*
Trifolium pratense δ, *Smith Fl. Brit.* 785.

Damp pastures; perennial; July.

Stem simple, stiff; *upper leaves* often opposite; leaflets small; *stipules* ovate, awned; *peduncles* long; *calyx-teeth* 4, nearly equal; *flowers* large, flesh-coloured.

8. *Trifolium ochroleucum.* *Yellowish-white trefoil.*

Spike villous, ovate, roundish; *stem* nearly upright, branchy, downy; *leaflets* oblong; lower leaflets reverse heartshape; *lowest tooth* of the calyx much the longest.

Trifolium pratense hirsutum majus, flore albo sulphureo, seu ὠχροληύκῳ, *Raii Syn.* 328, 3.
Trifolium ochroleucum, *Lin. Syst. Nat. ed.* 12, 2, 233.

Chalky and sandy dry pastures; perennial; June, July.

Stem upright, rather branchy; *leaves* distant; upper leaflets opposite, not in the least cut; *stipules* linear, ribs simple; *head* terminal, peduncled, solitary; *corolla* sulphur-yellow.

e. Lagopodium. *Calyx villous, not inflated; corolla 5-petaled; flowers spiked; roots annual.*

9. *Trifolium arvense.* *Fallow trefoil.*

Spike very villous, nearly cylindrical; *calyx-teeth* bristle-like, equal, rather longer than the corolla; *leaflets* reverse ovate, lanceolate.

Trifolium arvense humile spicatum, seu Lagopus, *Raii Syn.* 330, 14.
Lagopodium, Pes leporis, *Ger. em.* 1193, 3.
Lagopus vulgaris, *Park.* 1107.
Trifolium arvense, *Lin. S. P.* 1083.
Hare-foot. Hares foot trefoil.

Sandy fields; annual; July and August.

Stem mostly upright, very much branched, villose, hairy; *stipules* linear, tip awlshape; *spike* greyish; odour permanent, aromatic when dried; *corolla* white or flesh-colour.

β. *nanum.* *Stem* trailing, 2 or 3 in. high; *leaves* and *stipules* silky; *spikes* many, roundish; *peduncles* short.

Trifolium q. Lagopus perpusillus, supinus perelegans maritimus Lobelii, *Dillen in Raii Syn.* 330, 15.

10. *Trifolium stellatum.* *Starry trefoil.*

Spike hairy; *calyx-teeth* leaflike, equal; *stem* diffused; *leaflets* reverse-heartshape, toothed; *stipules* elliptical.

Trifolium stellatum, *Lin. S. P.* 1083.

Sea-shores; annual; July.

Stem much branched; hairs horizontal; *spike* round or ovate; *calyx-teeth* spreading; mouth when half grown surrounded by a red and white circle; *standard* red; wings and keel pale red or white.

11. *Trifolium maritimum.* *Maritime trefoil.*

Spike hairy, globular; *calyx-teeth* spreading and dilating after flowering; *leaflets* reverse ovate, lanceolate; *stipules* lanceolate upright.

Trifolium stellatum glabrum, *Raii Syn.* 329, 8; *Ger. em.* 1208.
Trifolium maritimum, *Hudson ed.* 1, 284.
Trifolium stellatum, *Hudson Fl. Angl.* 326.
Star-headed trefoil. Teasel-headed trefoil.

Bogs by the sea; annual; June and July.

Stem spreading; branches rather hairy; *upper leaves* opposite, leaflets scarcely cut, hairy; *spike* small, blunt; *calyx-tube* hairy at the tip; teeth equal, growing long after flowering, 3-ribbed, persisting; *corolla* pale red; petals nearly equal.

f. *Calyx villous, not inflated; corolla 5-petaled; flowers in heads; roots annual.*

12. *Trifolium scabrum.* *Rough trefoil.*

Heads ovate, sessile, lateral; *calyx-teeth* unequal, lanceolate, mucronate, stiff, bent back; *leaflets* reverse-ovate, finely serrate.

Trifolium flosculis albis, in glomerulis oblongis asperis, cauliculis proxime adnatis, *Raii Syn.* 329, 11.
Trifolium scabrum, *Lin. S. P.* 1084.

Sandy and chalky fields; annual; May and June.

Stem prostrate, rough; *leaves* hairy; *stipules* scarious, lanceolate; *heads* hairy; *calyx* furrowed; *corolla* white.

13. *Trifolium striatum.* *Streaked trefoil.*

Heads ovate, sessile, lateral and terminal; *calyx* elliptical, hirsute, furrowed; *teeth* bristlelike, growing long, spreading; *stipules* ovate, pointed, scarious, ribbed.

Trifolium parvum hirsutum floribus parvis dilute purpureis in glomerulis mollioribus et oblongis, semine magno, *Raii Syn.* 329, 9.
Trifolium striatum, *Lin. S. P.* 1085.
Soft-knotted trefoil.

Dry barren sands; annual; June.

Stem procumbent, villous, branchy; leaflets reverse ovate or reverse heartshape; *calyx* furrowed; *corolla* purplish.

g. *Calyx becoming inflated; legumen 2-seeded; flowers white or reddish.*

14. *Trifolium fragiferum.* *Strawberry trefoil.*

Head roundish; *calyx* when in fruit inflated, membranaceous, downy; teeth bristlelike, 2 bent back.

Trifolium fragiferum, *Raii Syn.* 329, 12; *Ger. em.* 1208, 4; *Lin. S. P.* 1086.
Trifolium fragiferum Frisicum, *Park.* 1109.

Damp fields and pastures; perennial; July and August.

Stem prostrate; *leaflets* toothed, bald; *corolla* flesh-colour; *calyx* reticulately veined.

h. Lupulinum. *Calyx not enlarging; standard persistent, bending back; flowers yellow; root annual.*

15. *Trifolium procumbens.* *Procumbent trefoil.*

Spike ovate, imbricate; *standard* furrowed; *stem* procumbent *leaflets* reverse ovate, middle leaflet petioled.

Trifolium pratense luteum capitulis lupuli, vel agrarium, *Raii Syn.* 330, 16.
Trifolium procumbens, *Lin. S. P.* 1088.
Trifolium agrarium, *Hudson Fl. Angl.* 328, not of Linnæus.
Hop trefoil.

Dry sandy pastures; annual; July.

Stem diffused, ends ascending; *leaflets* toothed, bald; *stipules* semi-ovate, not cut, fringed; *spike* many-flowered, axillary, peduncled; *calyx-teeth* unequal; *standard* bent inwards, reverse heartshape.

16. *Trifolium minus.* *Small trefoil.*

Spike headed, hemispherical; *peduncles* stiff; *standard* rather smooth; *stem* procumbent; *leaflets* reverse ovate, middle leaflet petioled; *petiole* lengthened above.

Trifolium lupulinum alterum minus, *Raii Syn.* 330, 17.
Trifolium luteum minimum, *Ger. em.* 1186, 6; *Park.* 111.
Trifolium procumbens, *Hudson Fl. Ang.* 328.
Trifolium dubium, *Sibthorp Fl. Oxon.* 231.
Trifolium minus, *Eng. Bot.* 1256.
Little yellow trefoil. Small hop trefoil.

Dry sandy pastures; annual; June to August.

Stem prostrate; *leaves* reverse heartshape, streaked; *stipules* ovate, fringed; *peduncles* hairlike; *spike* 8 to 10-flowered; *calyx-teeth* unequal; *standard* ovate, not bent inwards.

17. *Trifolium filiforme.* *Threadlike trefoil.*

Spike headed, loose, few-flowered; *peduncles* hairlike, bent; *standard* smooth; *stem* prostrate, very slender; *leaflets* reverse heartshape, middle leaflet petioled.

Trifolium lupulinum minimum, *Dillen in Raii Syn.* 331, 17 *.
Trifolium filiforme, *Lin. S. P.* 1088.

Damp sandy places; annual; June and July.

Stem threadshape; *leaves* toothed; *stipules* ovate; *peduncles* hairlike; *spike* 3 to 5-flowered; *flowers* small; *calyx* bald; *standard* ovate, not inflected.

VI. 367. MELILOTUS. Pliny. *Melilot.*

Calyx tubular, 5-toothed; *keel* simple, shorter than the wings or standard; *legumen* longer than the calyx.—*Leaves* ternate; *flowers* yellow, in loose racemes.

Melilotus officinalis. *Shop melilot.*

Legumens racemous, hanging, rather wrinkled, pointed; 1 or 2-seeded; *stem* upright; *leaflets* ovate, oblong, toothed, bald.

Melilotus vulgaris, *Raii Syn.* 331, 1; *Park.* 719.
Melilotus Germanica, *Ger. em.* 1205 ‡.
Trifolium Melilotus officinalis, *Lin. S. P.* 1078.
Melilotus officinalis, *Willd. S. P.*
Trifolium officinale, *Smith Fl. Brit.* 781.
Common melilot. Plaister clover. Harts clover, Yorkshire.

Fields and hedges; annual; June and July.

Stem 2 feet high, branchy; *racemes* close, many-flowered; *flowers* gold-yellow, sometimes white, drooping; *legumens* hairy.—When dry, fragrant, the distilled water, although only slightly odorous, improves the flavour of other substances.

VII. 368. MEDICAGO. Tournefort. *Lucerne.*

Calyx nearly cylindrical, 5-cut; *keel* distant from the standard; *legumen* many-seeded, falcate or spiral, twisted. —*Leaves* ternate; *flowers* in heads or solitary, yellow, rarely blue.

a. *Legumen sickleshape, or curved circularly.*

1. *Medicago sativa.* *Cultivated lucerne.*

Peduncle racemous; *legumen* smooth, slightly spirally twisted; *stipules* not in the least cut; *leaflets* oblong, toothed; *stem* upright, bald.

Trifolium Burgundiacum, *Ger. em.* 1189.
Medicago sativa, *Lin. S. P.* 1096.
Burgundy trefoil. Horned clover. Lucerne.

Fields and pastures, naturalized; also cultivated; peren.; June and July.

Root woody; *stem* 2 feet high, much branched, bald; *leaves* petioled; leaflets serrated at the tip, hairy beneath; *flowers* violet; *legumen* 2 or 3-whirled.—Herb affords good forage, and in rich ground may be cut several times in the summer.

2. *Medicago falcata.* *Sickle lucerne.*

Peduncle racemous; *legumen* twisted, sickleshape, smooth; *leaflets* oblong, toothed at the tip; *stem* prostrate at the base.

Medica sylvestris, *Raii Syn.* 3331, 1.
Trifolium luteum siliqua cornuta, *Ger. em.* 1191.
Medica frutescens flavo flore Clusii, *Park.* 1114.
Medicago falcata, *Lin. S. P.* 1096.
Yellow horned trefoil. Butter jags.

Edges of fields and old walls; perennial; July.

Leaves slender; *flowers* yellow, violet, or yellow and violet, or greenish; *legumen* 4 to 8-seeded.

3. *Medicago lupulina.* *Hop lucerne.*

Spike ovate; *legumens* kidneyshape, 4-seeded, downy, streaked; *leaflets* ovate, slightly toothed at the tip; *stem* procumbent.

Melilotus q. Trifolium luteum lupulinum, *Raii Syn.* 331, 1.
Trifolium luteum lupulinum, *Ger. em.* 1186, 5.
Trifolium montanum lupulinum, *Park.* 1105.
Medicago lupulina, *Lin. S. P.*
Black trefoil. Nonesuch. Hop trefoil.

Fields and pastures, also cultivated; biennial; May to August.

Stem prostrate, angular; *peduncles* long; *flowers* small; *legumen* hairy, black.

β. *scabra.* *Legumen* cochleate, about 10 on one peduncle, slightly compressed, rough, with many tubercles.

Trifolium cochleatum, quod Medica polycarpos fructu minore compresso scabro Doody, *Raii Syn.* 333, 4.

γ. *glabra.* *Legumen* bald.

b. *Legumen snail-like, whirls many, downy, rather spinous.*

4. *Medicago minima.* *Least lucerne.*

Peduncles many-flowered; *stipules* semi-ovate, undivided; *leaflets* reverse ovate, slightly toothed; *legumens* orbicular, hirtous; spines stiff, hooked, divaricating.

Trifolium cochleatum q. Medica echinata minima Joh. Bauhini, *Raii Syn.* 333, 2.
Medica echinata parva recta, *Park.* 1115.
Medicago polymorpha minima, *Lin. S. P.* 1099.
Medicago minima, *Withering Bot. Arr. ed.* 3, 660.
Small hedgehog trefoil.

Sandy places; annual; June.

Plant very small, very downy; *leaves* not spotted.

β. *maritima.* *Plant* larger, less downy.

Trifolium cochleatum, quod Medica marina supina nostras, foliis viribus ad summos ramulos villosis Plukeneti, *Dillen in Raii Syn.* 334, 5.

c. *Legumen snail-like; whirls many, bald, spinous.*

5. *Medicago muricata.* *Thorny lucerne.*

Peduncles 3 or 4-flowered; *legumens* bald, flat upon both sides, whirls 5; *spines* very short, awlshape, radiating; *stipules* 1-leaved, toothed; *leaflets* rhomboid, ovate, toothed, hairy.

Trifolium cochleatum modiolis spinosis, *Raii Syn.* 333, 5.
Medicago polymorpha muricata, *Lin. S. P.* 1098.
Medicago muricata, *Withering Bot. Arr.* 813.

Sea-shores; annual; June.

Leaves not spotted, hairy.

6. *Medicago maculata.* *Spotted lucerne.*

Peduncles 2 to 4-flowered; *legumens* compressed on both sides; prickles awlshape, long, bent, spreading; *stipules* dilated, toothed; *leaflets* reverse heartshape, toothed, spotted, smooth.

Trifolium cochleatum folio cordato maculato, *Raii Syn.* 333, 1.
Trifolium cordatum, *Ger. em.* 1191, 4.
Medica Arabica Camerarii, sive Trifolium cordatum, *Park.* 1115.
Medicago polymorpha Arabica, *Lin. S. P.*
Medicago Arabica, *Withering Bot. Arr.* 812.
Medicago maculata, *Sibthorp Fl. Ox.*
Heart trefoil.

Sandy pastures; annual; June and July.

Stem prostrate; *leaves* bald, spotted with black; *flowers* yellow; *standard* nicked, larger than the wing.

VIII. 369. TRIGONELLA. Linnæus. *Fenugreek-trefoil.*

Calyx bellshape, 5-cut; *keel* very small; wings and standard slightly spread, appearing like a 3-petaled corolla; *legumen* peduncled, oblong, many-seeded, compressed or cylindrical, pointed, nearly upright.—*Stem* herbaceous; *leaves* ternate; *flowers* axillary and terminal.

Trigonella ornithopodiodes. *Birds-foot fenugreek-trefoil.*

Legumens 2 or 3, peduncled, slightly compressed, rather falcate, 8 or 10-seeded; *stem* declined; *leaflets* ovate, toothed.

Fœnugræcum humile repens, ornithopodii siliquis brevibus erectis, *Raii Syn.* 331, 1.
Trifolium Melilotus ornithopodioides, *Lin. S. P.* 1078.
Trigonella ornithopodioides, *De Cand. Fl. Gall.* 3926.

Barren sandy heaths; annual; June and July.

Stem prostrate, slightly branched; *leaves* bald; *stipules* lanceolate, connate; *peduncles* axillary, 3-flowered; *calyx-teeth* bristlelike; *standard* reddish; *legumen* wrinkled, hairy.

IX. 370. LOTUS. Theophrastus. *Birdsfoot-trefoil.*

Calyx tubular, persisting, 5-cut; *wings* connivent above, shorter than the standard; *legumen* oblong, upright, cylindrical.—*Leaves* trifoliate; *stipules* leaflike, ovate, distinct from the petiole.

1. *Lotus corniculatus.* *Horned birdsfoot-trefoil.*

Head depressed, 8 to 10-flowered; *stem* decumbent, solid; *legumen* spreading, stiff; *claw* of the standard ovate.

Lotus corniculata glabra minor, *Raii Syn.* 334, 1.
Trifolium siliquosum minus, *Ger. em.* 1190, 5.
Lotus corniculatus, *Lin. S. P.* 1092.
Small codded trefoil. Milk vetch.

Fields and pastures; also cultivated; perennial; June to August.

Stem decumbent; opposite leaflets closed together; *flowers* gold-colour; *standard* fulvous; *legumens* larger towards the end.—Herb, in moist meadows, makes excellent hay; flowers turn green in drying, like those of indigo.

2. *tenuifolius.* *Stem* long, slender, rather shrubby; *leaves* and *stipules* linear, lanceolate, bald; *legumen* slender.

Lotus pentaphyllus minor, angustioribus foliis, fruticosior, *Raii Syn.* 334, 2.

γ. *incanus.* *Leaves* hoary, beneath.

Lotus corniculatus minor, foliis subtus incanis, *Dill. in Raii Syn.* 334, 5.

δ. *glabra.* *Leaves* bald; *stipules* semi-ovate; *filaments* clubshape.

Lotus corniculatus 6, *Withering Bot. Arr.* 808.

2. *Lotus major.* *Great birdsfoot-trefoil.*

Heads depressed, 20-flowered; *stem* upright, pipey, cylindrical; *calyx-teeth* bearded, bent back; *legumens* cylindrical, spreading; *claw* of the standard linear.

Lotus corniculatus major, *Raii Syn.* 334, 3.
Lotus uliginosus, *Hoffmann Germ.* 2, 100.
Lotus rectus, *De Candolle Fl. Gall.* 3939.
Lotus major, *Smith Engl. Bot.* 30, 2091.

Damp places and woods; perennial; June and July.

Stem 3 feet high; branches long, diffuse; *stipules* nearly heartshape; *flowers* golden; *legumens* tapering towards the end.

β. *pilosus.* *Herb* slightly hairy.

Lotus pentaphyllus medius, pilosus, *Dillen in Raii Syn.* 334, 4.

3. *Lotus diffusus.* *Spread birdsfoot-trefoil.*

Peduncles 1 or 2-flowered; *stem* much branched, decumbent; *leaves* and *calyx* hairy; *legumens* round, linear, stiff, very slender.

Lotus diffusus, *Smith Fl. Brit.* 794.

Rocks and sandy shores of the sea; peren.; May, June.

Leaflets ovate, acute; *peduncles* axillary; *flowers* golden; *legumens* 6 times as long as the calyx; *seeds* globular.

X. 371. GLYCYRRHIZA. Dioscorides. *Liquorice.*

Calyx tubular, 2-lipped, upper lip 4-toothed, teeth unequal; lower lip simple, linear; *keel* two-petaled; *legumen* ovate, rather compressed, 3 to 6-seeded.

Glycyrrhiza glabra. *Bald liquorice.*

Legumen bald; *stipules* 0.

Glycyrrhiza vulgaris, *Raii Syn.* 324, 1; *Ger. em.* 1302, 2.
Glycyrrhiza vulgaris siliquosa, *Park.* 1098.
Common liquorice. Sweet root. Stick licorice.

Cultivated; perennial;

Flowers in racemes; *leaflets* ovate, rather glutinous beneath; seldom flowers and never ripens its fruit in England. —Root very sweet, and diminishes rather than increases thirst.

C. ASTRAGALIDEÆ. *Stamens* diadelphous; *legumens* 2-celled; partitions longitudinal, complete or incomplete.

XI. 372. OXYTROPIS. De Candolle. *Axe-vetch.*

Calyx 5-cut; *keel* ending in a straight point; *legumen* 2-celled, or imperfectly 2-celled; upper suture bent inwards.

1. *Oxytropis Uralensis.* *Ural axe-vetch.*

Herb stemless, villous, silky; *legumen* 2-celled, upright, ovate, cylindrical, inflated, downy; *style* persistent; *stipules* adherent to the petiole.

Astragalus Uralensis, *Lin. S. P.* 1071.
Oxytropis Uralensis, *De Candolle Fl. Gall.* 3955.

Sandy alpine places; perennial; July.

Leaves radical; leaflets ovate, lanceolate; *petioles* persistent; *stipules* scarious; *spike* longer than the leaves; *flowers* violet, spiked or in heads; *bracteæ* linear, lanceolate, the length of the calyx.

2. *Oxytropis campestris.* *Field axe-vetch.*

Herb stemless, rather silky; *scape* nearly as long as the leaves; *legumen* upright, ovate, inflated, downy, imperfectly 2-celled; *stipules* adherent to the petiole.

Astragalus campestris, *Jacquin Col.* 1, 1319.
Oxytropis campestris, *De Candolle Fl. Gall.* 3956.

Alpine fields; perennial; July.

Leaves radical; *flowers* spiked, yellow; base of the keel purple; *spike leafless.*

XII. 373. ASTRAGALUS. Dioscorides. *Milk-vetch.*

Calyx 5-toothed; *keel* blunt; *legumen* 2-celled, or imperfectly 2-celled; lower suture bent inwards.

a. *Stipules not adherent to the petiole; flowers purple; stem diffuse.*

1. *Astragalus hypoglottis.* *Hypoglottis milk-vetch.*

Stem procumbent; *petioles* oblong; *spike* ovate; *peduncles* longer than the leaves; *legumen* upright, ovate, channelled.

Astragalus incanus parvus purpureus nostras, *Raii Syn.* 326, 2.
Astragalus hypoglottis, *Lin. Mant.* 2, 274.
Astragalus arenarius, *Hudson Fl. Angl.* 323.
Astragalus Danicus, *Retz. Observ.*
Astragalus Glaux, *Villars Delph.* 3, 459.
Astragalus epiglottis, *Dickson Hort. Sicc.* 1, 13.
Purple milkwort. *Purple cocks-head.*

High sandy and chalk fields; perennial; June and July.

Root creeping, branched; *stem* rather branched; *leaflets* small, hairy beneath; *stipules* ovate, lanceolate; *bracteæ* very short; *flowers* purple, sometimes white; *legumen* hairy, 1-seeded, channelled on the back.

b. *Stipules not adherent to the petiole; flowers yellowish; stem prostrate.*

2. *Astragalus glycyphyllus.* *Sweet-leaved milkvetch.*

Stem prostrate; *leaflets* bald, ovate, blunt with a point; *stipules* oval, lanceolate; *racemes* peduncled, shorter than the leaves; *legumens* rather 3-sided, slightly bent.

Astragalus luteus perennis procumbens vulgaris sive sylvestris, *Raii Syn.* 326, 1.
Hedysarum glycyrrhizatum, *Ger. em.* 1233.
Glaux vulgaris leguminosa, seu Glycyrrhiza sylvestris, *Park.* 1098; description not figure.
Astragalus glycyphyllos, *Lin. S. P.* 1067.
Sweet milkvetch. Wild liquorice. Liquorice vetch.

Woods and hedges on chalk; perennial; June and July.

Root branchy; *stem* round; *leaves* light green; *calyx-teeth* very short; *legumen* many-seeded.

C. LATHYROIDEÆ. *Cotyledons* not coming out of the ground; *leaves* pinnate; *main petiole* ending in a filament or tendril; *stamens* 10, diadelphous; *legumen* 1-celled.

XIII. 374. LATHYRUS. Theophrastus. *Vetchling.*

Calyx 5-cut, 2 upper lobes short; *style* flat, broad at the tip; hairy or downy before; *legumen* oblong, many-seeded. —*Petiole* ending in a tendril.

a. *Annual; peduncle* 1 *or* 3*-flowered.*

1. *Lathyrus aphyllus.* *Leafless vetchling.*

Leaves 0; *stipules* arrowshape, approaching to heartshape, very large; *peduncles* 1-flowered.

Aphaca, *Raii Syn.* 320, 1; *Ger. em.* 1250, 3; *Park.* 1067.
Lathyrus Aphaca, *Lin. S. P.* 1029.
Yellow vetchling. Small yellow fetch.

Corn-fields and woods; annual; June to August.

Stem branchy at bottom; *tendrils* simple; *stipules* ribbed, glaucous; *peduncles* bracteated; *flowers* small, drooping; *legumen* bald.

2. *Lathyrus gramineus.* *Grassy vetchling.*

Tendril 0; *leaves* simple, lanceolate; *stipules* awlshape; *peduncle* 1 or 2-flowered.

Catanance leguminosa quorundam, *Raii Syn.* 325, 1.
Ervum sylvestre, *Ger. em.* 1249, 2.
Ervum sylvestre seu Catanance, *Park.* 1079.
Lathyrus Nissolia, *Lin. S. P.* 1029.
Crimson grass-fetch.

Edges of fields and woods; annual; May.

Stem 2 feet high; *leaves* sessile, linear, lanceolate; *peduncles* shorter than the leaves; *standard* red; wings and keel white and purple; *legumen* linear, roundish, hanging.

3. *Lathyrus hirsutus.* *Rough vetchling.*

Leaves 1-paired; leaflets lanceolate, pointed; *peduncles* 2 or 3-flowered; *legumen* compressed, hairy; *seeds* rough.

Lathyrus siliqua hirsuta, *Raii Syn.* 320, 4.
Lathyrus hirsutus, *Lin. S. P.* 1032.
Rough codded chichling pea.

Fields; annual; July.

Stem winged; *tendril* 3-cut; leaflets bald; *stipules* arrowshape, pointed, hairy; *peduncles* thrice as long as the leaves; *flowers* purple; *calyx* hairy; *stigma* very blunt.

b. *Perennial; peduncles many-flowered.*

4. *Lathyrus pratensis.* *Meadow vetchling.*

Leaves 1-paired; *tendrils* nearly simple; leaflets lanceolate, 8-ribbed; *stipules* arrowshape, as large as the leaflets; *peduncles* many-flowered.

Lathyrus luteus sylvestris dumetorum, *Raii Syn.* 320, 3.
Lathyris sylvestris flore luteo, *Ger. em.* 1231, 6; *Park.* 1062.
Lathyrus pratensis, *Lin. S. P.* 1033.
Tare everlasting.

Fields and pastures; perennial; July and August.

Root tubercular; *stem* much branched, acute-angled; *leaflets* bald; *peduncles* much longer than the leaves; *calyx* hairy; *corolla* gold-yellow; *legumen* bald.—Being very vivacious, it has been proposed for forage; but cattle are not fond of it.

5. *Lathyrus sylvestris.* *Wood vetchling.*

Leaves 1-paired; leaflets swordshape; *internodes* winged; wings membranaceous; *peduncles* 4 or 5-flowered.

Lathyrus major flore rubente et albido minore dumetorum, sive Germanicus, *Raii Syn.* 319, 2.
Lathyrus sylvestris, *Lin. S. P.* 1033.
Narrow leaved everlasting pea.

Damp woods and hedges; perennial; July and August.
Root branched; *stem* 6 feet high; *tendrils* 3 or 4-cut; *leaflets* bald, ribbed; *stipules* very slender, not cut; *peduncles* longer than the leaves; *calyx* bald; *standard* purple; wings violet; keel greenish; *legumen* brownish.

6. *Lathyrus latifolius.* *Broadleaved vetchling.*
Leaves 1-paired; leaflets elliptical; *internodes* winged; wings membranaceous; *peduncle* many-flowered.

Lathyrus major latifolius, *Raii Syn.* 319, 1; *Ger. em.* 1229, 1.
Lathyrus major perennis, *Park.* 1061.
Lathyrus latifolius, *Lin. S. P.* 1038.
Pea everlasting.

Woods; perennial; July and August.
Leaves many-ribbed; *tendrils* 5-cut; *stipules* ovate, broader than the stem; *flowers* very large, rose-colour.

7. *Lathyrus palustris.* *Marsh vetchling.*
Leaves many-paired; leaflets linear, lanceolate, acute; *stipules* rather arrowshape, lanceolate; *internodes* winged; wings membranaceous; *peduncle* 3 to 6-flowered.

Lathyrus viciæformis, seu Vicia lathyroides nostras, *Raii Syn.* 320, 1.
Lathyrus palustris, *Lin. S. P.* 1034.

Damp fields and pastures; perennial; July and August.
Tendrils 2-cut; *peduncles* twice as long as the leaves; *flowers* bluish violet; *legumen* bald.

XIV. 375. PISUM. Theophrastus. *Pea.*
Calyx 5-cut; two upper lobes shortest; *style* 3-sided, keeled below; *stigma* rough-haired; *legumen* oblong, many seeded; *seeds* globular; hilum rounded.

1. *Pisum arvense.* *Field pea.*
Petiole round; *leaves* pinnate; *stipules* nearly heartshape, crenated; *peduncle* 1 or many-flowered.

Pisum arvense flore roseo, fructu ex cinereo-nigricante, *Raii Syn.* 318, 2.
Pisum arvense, *Lin. S. P.* 1027.
Pisum biflorum, *Stokes Bot. Mat. Med.* 20.
Gray pea.

Cultivated in fields; annual; June and July.
Peduncle 1-flowered; *standard* rose-colour; wings dark purple; *seed* gray.—Leaves used as fodder; seeds nutritive but flatulent.

β. *variegatum.* *Peduncle* many-flowered; *seed* gray and reddish.

Pisum flore roseo, fructu variegato, *Dillen in Raii Syn.* 318, 3.
Maple pea.

γ. *rufum.* *Peduncle* many-flowered; *standard* rose-colour; wings dark purple; *seed* reddish.

δ. *umbellatum.* *Peduncle* many-flowered, terminal; *stipules* 4-cut, pointed; *standard* white; wings pink; *seed* purplish brown.

Pisum umbellatum, *Dillen in Raii Syn.* 318, 4; *Ger. em.* 1220, 3.
Pisum umbellatum, sive roseum, *Park.*
Rose pea. Tufted pea. Scotch pea.

ε. *quadratum.* *Peduncles* many-flowered; *seeds* gray, angular, large.

Pisum majus, *Ger. em.* 1219, 1.
Pisum saccharatum, *Park. Par.* 523, 5.
Rouncival pea.

ζ. *humile.* *Stem* upright, not twining, branching; *leaves* 2-paired, leaflets rounded.

η. *album.* *Peduncles* many-flowered; *corolla* white.

Pisum minus, *Ger. em.* 1219, 2.
Pisum sylvestre primum, *Park.* 1059.
Pisum sativum, *Lin. S. P.* 1026.
Field pea. Garden pea.

2. *Pisum maritimum.* *Maritime pea.*

Petioles flattish above; *stem* trailing, angular; *stipules* arrowshape; *peduncles* many-flowered.

Pisum marinum, *Raii Syn.* 319, 6; *Ger. em.* 1250, 3.
Pisum spontaneum maritimum Anglicum, *Park.* 1059.
Pisum sylvestre, *Ger. em.* 1220, 5.
Pisum maritimum, *Lin. S. P.* 1027.
Pulse. Pease. Wild pea. English sea-pea.

Sea-shore; perennial; June and July.

Root creeping; *stem* simple, bald; *stipules* bent back, toothed at bottom; *calyx* bald; *standard* purplish blood-colour; wings and keel bluish flesh-colour; *legumen* smooth. —Nutritive; first observed on the beach at Orford in Suffolk, during the famine of 1550.

XV. 376. OROBUS. Theophrastus. *Peaseling.*

Calyx 5-cut; 2 upper lobes shortest; *style* slender, linear, rough-haired at the tip; *legumen* oblong, roundish, many-seeded; *hyle* generally linear.

1. *Orobus sylvaticus.* *Wood peaseling.*

Leaves pinnate, hairy, 7 to 10-paired; leaflets ovate, oblong; *stipules* nearly arrowshape; *stem* branched, trailing, hairy at bottom.

Orobus sylvaticus nostras, *Raii Syn.* 324, 1.
Orobus sylvaticus, *Lin. S. P.* 1029.
Vicia Cassubica, *Fl. Dan.* 98, not of Linnæus.

Mountainous woods and hedges; perennial; May, June.

Root woody; *stems* many, slightly branched; *tendrils* very small; *leaflets* ovate, pointed, hairy beneath; *flowers* many, racemous, 1-sided, yellowish with purple lines; *calyx* hairy; *legumen* ovate, bald, 3-seeded.

β. *simplicifolius. Leaves* very large, simple; *plant* barren.

2. *Orobus tuberosus.* *Tuberous peaseling.*

Leaves pinnate, 2 to 4-paired; leaflets lanceolate, pale, glaucous beneath; *stipule* nearly arrowshape, 4 or 5-toothed; *stem* simple, winged.

Orobus sylvaticus foliis oblongis glabris, *Raii Syn.* 324, 2.
Astragalus sylvaticus, *Ger. em.* 1237, 2.
Lathyrus sylvestris lignosior, *Park.* 1072.
Orobus tuberosus, *Lin. S. P.* 1028.
Heath pea. Wood pea. Cor-meille, Highlanders.

Heaths and pastures; perennial; May and June.

Root tuberous; *stem* angular; *leaves* not ending in a tendril; leaflets blackish green, bald, flat; *flowers* racemous, one-rowed, purplish red growing blue; *legumen* many seeded; *style* persisting.—Tubers nutritive.

3. *Orobus tenuifolius.* *Fineleaved peaseling.*

Leaves pinnate, 2 or 3-paired; leaflets slender, linear, pointed, grooved above; *stipules* lanceolate, pointed, toothed at bottom.

Orobus tuberosus β, *Willd. S. P.*
Orobus tenuifolius, *Roth Fl. Germ.* 1305.

Sandy places; perennial; May and June.

Root tuberous; *stem* 9 inches high, weak, 4-angled below, winged above; *flowers* small, light-coloured.

XVI. 377. VICIA. Pliny. *Vetch*

Calyx tubular, 5-cut; 2 upper lobes short; *style* thread-like, in a right angle with the ovary, hairy above and below the tip; *legumen* oblong, many-seeded.

a. Cracca. *Peduncles long, many-flowered; calyx-teeth short; stigma bearded all over; perennial.*

1. *Vicia sylvatica.* *Wood vetch.*

Peduncles many-flowered, longer than the leaves; leaflets illiptical, oblong, rather pointed; *stipules* lunate, bristle-like, toothed.

Cracca q. Vicia sylvatica multiflora maxima, *Raii Syn.* 322, 4.
Vicia sylvatica, *Lin. S. P.* 1035.

Mountainous woods and hedges; perennial; July, Aug.

Root branchy; *stem* much branched; *leaves* many-paired, tendril branched; *flowers* spreading, white, purple or blue veined with flesh-colour; *legumen* bald, 4-seeded.

2. *Vicia multiflora.* *Many-flowered vetch.*

Peduncle many-flowered, longer than the leaves; *flowers* embricated; *leaflets* linear, rather woolly; *stipules* nearly arrowshape, linear, lanceolate, not cut.

Cracca, *Raii Syn.* 322, 3.
Vicia multiflora seu spicata, *Park.* 1072.
Vicia Cracca, *Lin. S. P.* 1035.
Tufted vetch.

Woods, hedges, and fields; perennial; July and August.

Root creeping; *stem* weak; *leaves* many-paired, silky; *peduncles* branched; *stipules* villous; *calyx* coloured, rather naked; *legumen* bald.

b. Ervum. *Peduncles long, few-flowered; calyx-teeth long, unequal; stigma capitate, bearded all over; annual.*

3. *Vicia tetrasperma.* *Four-seeded vetch.*

Peduncle 2 or 3-flowered, as long as the leaves; *leaflets* oblong, truncate; *legumen* bald, 4-seeded.

Cracca minor siliquis singularibus, flosculis cærulescentibus, *Raii Syn.* 322, 3.
Ervum tetraspermum, *Lin. S. P.* 1039.
Smooth tare.

Fields and hedges; annual; June.

Root fibrous; *stem* upright, branchy, hairy; *leaflets* many, alternate; *tendrils* 2-cut; *stipules* inclining to hastate; *flowers* pale purple; *standard* streaked.

β. *major.* *Flowers* large; *legumen* 5 to 7-seeded.

4. *Vicia hirsuta.* *Hairy vetch.*

Peduncles 3 to 7-flowered, as long as the leaves; *leaflets* hairy, blunt; *legumen* hairy, 2-seeded.

Cracca minor, *Raii Syn.* 322, 1.
Vicia sylvestris, seu Cracca minima, *Ger. em.* 1228, 5.
Aracus, seu Cracca minor, *Park.* 1070.
Ervum hirsutum, *Lin. S. P.* 1039.
Small wild tare. Tine tare.

Pastures; annual; June.
Stem nearly bald; *flowers* purplish white.

c. Vicia. *Flowers axillary, sessile, purple; legumen dry; hilum of the seed lateral; annual.*

5. *Vicia sativa.* *Cultivated vetch.*
Legumen sessile, generally in pairs, upright; *lower leaves* retuse; leaflets ovate, truncated, pointed; *stipules* toothed, nearly arrowshape, spotted; *seeds* smooth.

Vicia, *Raii Syn.* 320, 1; *Ger. em.* 1227, 1.
Vicia sativa, *Lin. S. P.* 1037.
Fetches. Tares.

Dry fields, also cultivated; annual; April to June.
Leaves many-paired; *tendrils* 2 or 3-cut; *flowers* solitary, or in pairs, purple; *legumen* rough; seeds slightly compressed.—Herb used green or dried for fodder; seeds given to pigeons.

β. *nigra. Leaflets* reverse heartshape, rather wedgeshape; *seeds* black.

Vicia vulgaris sativa, *Park.* 1072.

γ. *alba. Leaflets* of some leaves roundish, of others long, slender; *seeds* white.

Vicia albo semine, *Raii Hist. Pl.*

δ. *linearifolia. Leaflets* linear.

Vicia sylvestris, sive Cracca major, *Raii Syn.* 321, 4; *Ger. em.* 1227, 4.
Aracus sive Cracca major, *Park.* 1071.
Vicia sativa β, *Smith Fl. Brit.* 770.
Vicia lathyroides α, *Hudson Fl. Angl.* 318.
Strangle tare. Tine vetch.

ε. *angustifolia. Lower leaflets* reverse-heartshape, mucronate; upper leaflets strapshape; *flowers* large, blood-red; *legumen* long, black.

Vicia sylvestris flore ruberrimo, siliqua rubra nigerrima, *Raii Syn.* 321, 5.
Vicia angustifolia, *Sibthorp Fl. Ox.* 224.

6. *Vicia lathyroides.* *Vetchling vetch.*
Legumen sessile, solitary, bald, upright; *lower leaves* 2-paired, retuse; upper leaves 4 to 6-paired; *stipules* not dotted; *seeds* cubical, tuberculated.

Vicia minima præcox Parisiensium, *Dillen in Raii Syn.* 321, 7.
Vicia lathyroides, *Lin. S. P.* 1037.
Ervum solomense, *Lin. S. P.* 1042.
Spring vetch. Spring tare.

Fallow lands in gravel or chalk; annual; April, May.

Stem procumbent, downy; *tendrils* simple or 0; *leaflets* reverse heartshape, upper leaflets slender; *flowers* bluish or white; *legumen* bald, many-seeded.

d. Vicia. *Flowers solitary, yellow, axillary, sessile; legumen dry, bent back; perennial.*

7. *Vicia lutea.* *Yellow vetch.*

Legumen solitary, sessile, bent back, hairy; *stem* diffuse; *stipules* coloured; *standard* bald.

Vicia lutea, *Lin. S. P.* 1037.

Sea shores and rocks; perennial; August.

Root creeping; *stem* bald, slightly branched; *leaves* many-paired; leaflets hairy underneath; *stipules* blackish red; *flowers* sulphur-yellow or white, streaked; *legumen* 5 or 6-seeded; *seeds* smooth.

8. *Vicia hybrida.* *Mule vetch.*

Legumen solitary, sessile, bent back, hairy; *stem* upright; *standard* villous; *leaflets* naked.

Vicia luteo flore sylvestris, *Raii Syn.* 321, 6.
Vicia hybrida, *Lin. S. P.* 1037.

Bushy places; perennial; June.

Stipules green; *flowers* yellow streaked with purple; *standard* reddish at bottom; *legumen* 5-seeded.

9. *Vicia lævigata.* *Smooth vetch.*

Legumen sessile, solitary, bent back, bald; *stem* rather upright; *leaflets* quite bald.

Vicia hybrida, *Hudson Fl. Angl.* 319.
Vicia lævigata, *Engl. Bot.* 483.
Sea vetch.

Rocks by the sea; perennial; July and August.

Stem branched, quite bald; *leaflets* elliptical, lanceolate; *stipules* green; *flowers* greyish yellow, or pale purple; *legumen* 5-seeded.

e. Aphaca. *Peduncles few-flowered, axillary; legumens small; hilum lateral; perennial.*

10. *Vicia sepium.* *Hedge vetch.*

Peduncles 4-flowered; *legumens* upright; *leaves* many-paired; leaflets ovate, obtuse; outer leaflets smallest.

Vicia sepium perennis, *Raii Syn.* 320, 2.
Vicia maxima dumetorum, *Ger. em.* 1727, 2; *Park.* 1072.
Vicia sepium, *Lin. S. P.* 1038.
Bush vetch.

Bushy places and hedges; perennial; May and June.

Stem 2 feet high; *tendrils* branched; *stipules* lunate, toothed; *flowers* purplish or blue; *calyx* hairy; *legumen* bald; *seeds* globular, smooth.

β. *alba.* *Flowers* white.

Vicia folio subrotundo, brevi, obtuse mucronato, pediculo brevi insidente, flore viciæ sepium seu dumetorum vulgaris, *Raii Syn.* 321, 3.

11. *Vicia Bithynica.* *Bithynian vetch.*

Peduncles 1 or 2-flowered; *legumen* upright, rough; *leaflets* 2 to 6-paired, ovate, lanceolate; *stipules* toothed.

Vicia Bithynica, *Lin. S. P.* 1038.

Sandy pastures; perennial; July and August.

Stems many, branched, bald; *tendrils* long, bald; *leaflets* large, acute, hairy beneath; *stipules* large; teeth unequal, acute, divaricated; *calyx-teeth* fringed; *standard* large, lead colour; *wings* and *keel* white; *legumen* 5 or 6-seeded; *seeds* round, smooth.

f. Faba. *Peduncles few-flowered, axillary; legumen large, leathery; hilum terminal; annual.*

12. *Vicia vulgaris.* *Common vetch.*

Legumens 3 or 4, gibbous; *leaflets* ovate, not cut; *stipules* arrowshape, toothed at the base; *tendrils* awlshape.

Faba, *Raii Syn.* 323, 1.
Faba major hortensis, *Ger. em.* 1209, 1.
Faba sativa, *Park.* 523.
Vicia Faba, *Lin. S. P.*
Faba vulgaris, *De Candolle Fl. Gall.* 4028.
Great garden bean. Windsor bean. Mazagan bean.

Cultivated; annual; April and May.

Stem angular, upright, pipey; *tendrils* very short; *corolla* white with black spots; *seeds* compressed.—Stem made into flax; seeds nutritive but flatulent, eaten fresh, or when dry ground with wheat into flour.

β. *equina.* *Leaves* ovate, oblong; *seeds* rounded, small.

Faba minor sive equina, *Raii Syn.* 323, 2.
Faba minor sylvestris, *Park.* 1054.
Common bean. Ger. em. 1210, 3. *Horse bean.*

Seeds used in this country for horse-corn, but eaten by the poor in foreign countries; also ground with wheat.

D. ORNITHOPODEÆ. *Stamens* diadelphous; *legumen* one-celled, or many-celled, not opening spontaneously; cells transverse, 1-seeded.

XVII. 378. ORNITHOPUS. Gesner. *Birds-foot.*

Calyx 5-toothed, tubular; *keel* very small; *legumen* bent, slender, round, pointed, jointed; joints cylindrical.

Ornithopus perpusillus. *Very-small birds-foot.*

Herb downy; *leaves* pinnate, 6 to 9-paired; *flowers* in heads, bracteated; *legumen* roundish, bent inward.

Ornithopodium majus, and minus, *Ger. em.* 1241, 3 and 4.
Ornithopus perpusillus, *Lin. S. P.* 1049.

Sandy fields; annual; May.

Root fibrous; *stem* prostrate, much branched; *leaves* pinnate with an odd leaflet; *heads* few-flowered; *standard* and wings red variegated; keel greenish; *legumen* 6 or 8-celled, necklaceshape, slightly compressed.

β. *nodosa.* *Root* with tubercles.

Ornithopodium radice nodosa, *Raii Syn.* 326, 1; *Park.* 1093.

XVIII. 379. HIPPOCREPIS. Linnæus. *Horseshoe-vetch.*

Calyx unequally 5-toothed; *standard-claw* longer than the calyx; *legumen* oblong, compressed, membranaceous, jointed, bent; one suture deeply toothed.

Hippocrepis comosa. *Tufted horseshoe-vetch.*

Legumens 5 or 8 in a tuft, crowded, peduncled, bent, rough, crenated on both edges.

Ferrum equinum Germanicum siliquis in summitate, *Raii Syn.* 325, 1.
Hedysarum glycyrrhizatum, *Ger.* 1056, 2; not *Ger. em.*
Ferrum equinum comosum, *Park.* 1091.
Hippocrepis comosa, *Lin. S. P.* 1050.

Dry chalky fields; perennial; May to August.

Herb bald; *stem* prostrate, branched; *leaves* pinnate with an odd leaflet; leaflets reverse ovate, nicked; *stipules* lanceolate; *peduncles* axillary, umbelled; *calyx* bald; *legumen-cells* and *seeds* kidneyshape.

XIX. 380. ONOBRYCHIS. Dioscorides. *Sainfoin.*

Calyx 5-cut; *keel* blunt at the end; wings very short; *legumen* compressed, short, 1-celled, 1-seeded, mostly prickly; upper suture flattened, truncated.

Onobrychis sativa. *Cultivated sainfoin.*

Stem ascending; *leaves* pinnate; leaflets wedgeshape, bald; *keel* shorter than the standard; *legumen* bald, prickly, toothed.

Onobrychis seu Caput gallinaceum, *Raii Syn.* 327, 1; *Ger. em.* 1243, 1.
Onobrychis vulgaris, *Park.* 1082.
Hedysarum Onobrychis, *Lin. S. P.* 1059.
Onobrychis sativa, *De Cand. Fl. Gall.* 4055.
Medick fetchling. Cocks head. Sainfoin. Cinquefoil.

Chalky fields, also cultivated; perennial; June and July.

Stem 3 feet high, round; *upper leaves* pinnate, many-paired; leaflets equal; *peduncles* very long, spiked; *flowers* bracteated; *calyx* awlshape; *corolla* deep rose-colour, streaked.—Herb used for fodder.

Fam. XXIX. 64. CELASTRINÆ. R. Brown. *Frangulaceæ*, De Candolle.

Calyx 1-leaved, 4 or 5-cut; *petals* 4 or 5, inserted on the disk of the calyx; *stamens* as many as the petals, alternating with them; *ovary* simple, free, girt with the calyx-disk; *capsule* many-celled; valves partition-bearing; *perisperm* fleshy; corculum straight, radicle below.—*Stem* arborescent or shrubby; *leaves* stipuled, alternate or opposite.

Styles 2 or 3; *caps.* 2 or 3, inflated;
seeds bony, globular ..... STAPHYLÆA. 381.
Style 1; *cap.* 5-celled, 5-valved;
seeds covered with a coloured arille .... EVONYMUS. 382.

I. 381. STAPHYLÆA. Linnæus. *Bladdernut.*

Calyx 5-lobed, with a pitchershape disk; *petals* 5; *stamens* 5; *ovary* 2 or 3-lobed; *styles* 2 or 3; *capsules* 2 or 3, inflated, joined below; *seeds* bony, globular, truncated at bottom, inserted on the inner angle.

Staphylæa pinnata. *Pinnate bladdernut.*

Leaves pinnate; leaflets 5, ovate, acute, serrated.

Staphylodendron, *Raii Syn.* 468, 1.
Nux vesicaria, *Ger. em.* 1437, 1; *Park.* 1417.
Staphylæa pinnata, *Lin. S. P.* 386.

Woods and thickets, naturalized? shrubby; June.

Stem short, branchy, bald; *leaflets* cut; *racemes* terminal drooping; *bracteæ* membranaceous, bristlelike; *corolla* yellow; *seed* hard, shining.

II. 382. EVONYMUS. Theophrastus. *Spindletree.*

Calyx 4 or 5-cut, flat, with a peltate disk; *petals* 4 or 5, spreading; *stamens* 4 or 5, placed on glands prominent above the calyx-disk; *style* 1; *capsule* 5-celled, 5-valved; *seeds* covered with a coloured arille, inserted at the inner angles of the cells.

Evonymus Europæus. *European spindle-tree.*

Stamens mostly 4; *peduncles* compressed, many-flowered; *stigmata* awlshape; *leaves* petioled, bald.

Evonymus vulgaris, *Raii Syn.* 468, 1; *Park.* 241.
Evonymus Theophrasti, *Ger. em.* 1468, 1.
Evonymus Europæus, *Lin. S. P.* 286.
Prickwood. Prick timber. Gatteridge tree.

Woods and hedges; shrubby; April and May.

Branches bald, green, when young 4-angled; *leaves* opposite, lanceolate, serrate; *peduncles* axillary, forked; *flowers* white, fœtid; *capsules* purple; *seeds* white; *arille* yellow.—Branches used for butchers' skewers, and toothpicks; berries vomit and purge very violently.

Fam. XXX. 65. RHAMNEÆ. R. Brown. *Rhamnoideæ*, Richard. *Frangulacearum sectio*, De Candolle.

Calyx 1-leaved, 4 or 5-cut; *corolla* 0, or many-petaled, inserted on the calyx-disk; *petals* as many as the calyx-lobes; *stamens* as many as the lobes, and opposite to the petals; *ovary* simple, free, girth with the calyx-disk; *berry* many-celled; *seeds* ascending or upright; perisperm 0, or very thin; corculum straight; radicle below.—*Stem* arborescent or shrubby; *leaves* stipuled, alternate or opposite.

383. RHAMNUS. Theophrastus. *Buckthorn.*

Calyx pitchershape, 4 or 5-cut; *petals* 4 or 5, sometimes 0; *stamens* 4 or 5; *style* 1; *stigmata* 2 or 4; *berry* 2 or 4-celled, 2-seeded; *hile* cartilaginous, at the bottom of the seed.

a. Rhamnus. *Branches spinous; stigma 4-cut; plant dioicous.*

1. *Rhamnus catharticus.* *Purging buckthorn.*

Calyx 4-cut; *leaves* ovate, toothed; teeth acute; *stem* upright; branches ending in spines; *plant* dioicous.

Rhamnus catharticus, *Raii Syn.* 466, 1; *Lin. S. P.* 279.
Rhamnus solutivus, *Ger. em.* 1337, 1.
Rhamnus solutivus, seu Spina infectoria vulgaris, *Park.* 243.
Waythorn. Laxative ram. Rhein berry. French berry. Yellow berry.

Woods and hedges; shrubby; May and June.

Branches stiff, alternate; *leaves* in bundles, petioled, ribbed, when young downy; *flowers* peduncled, yellowish green; *berry* black, 4-seeded.—Juice of the unripe berries yellow, used in staining; of the ripe berries cathartic, but griping, made into a syrup, and corrected in some measure by ginger and cloves, also boiled down with some alum, into a green water-colour, called sap green; when gathered late in autumn, the juice is purple; bark used to dye yellow.

b. Frangula. *Branches without spines; stigma 2-cut; berry 2-seeded.*

2. *Rhamnus alnoides.* *Alderlike buckthorn.*

Branches spineless; *flowers* hermaphrodite; *style* 1; *leaves* petioled, not cut, bald; *berry* 2-seeded.

Frangula seu Alnus nigra baccifera, *Raii Syn.* 465, 1; *Park* 240.
Alnus nigra, sive Frangula, *Ger. em.* 1470.
Rhamnus Frangula, *Lin. S. P.* 280.
Black aller tree. Butchers prick tree. Berrybearing alder.

Wet woods; shrubby; May.

Stem much branched; *peduncles* axillary, 1-flowered; *corolla* white; *anthers* purple; *berries* dark violet.—Inner bark purgative in doses of 2 to 4 drachms in infusion, also dyes yellow; wood makes soft charcoal, fit for gunpowder.

Subseries III. D. PLANTÆ EXOGENÆ THALAMIFLORÆ.

Perigonium double; *petals* many, distinct or soldered together, inserted along with the stamens on the thalamus.

FAMILIES.

A. *Ovary single; placentarium central; stamens more than* 10.

Stamens polyadelphous; *styles* 3 or 5; *leaves* opposite; *flowers* yellow .. HYPERICINEÆ. 67.

Stamens monadelphous; *styles* many; *leaves* alternate; *cal.* double; *pet.* regular MALVACEÆ. 69.

Stamens distinct; *style* 1; *leaves* alternate; *petals* 5; *perisperm* fleshy ..... TILIACEÆ. 70.

B. *Ovary single; placentarium central; stamens not more than* 10.

Perisperm 0; *stigmata* 5; *ovary* 5-sided; *stem* herb.; *leaves* stipuled, alternate .. GERANIEÆ. 66.

Perisperm 0; *stigmata* 5; *ovary* globular; *stem* herb.; *leaves* stipuleless ..... LINEÆ. 71.

Perisperm 0; *stigma* 1; *samares* 2; *stem* arbor.; *leaves* opposite; *pet.* 5, equal ACERINEÆ. 68.

Perisperm farinaceous; *corculum* curved; *stem* herb., jointed; *leaves* opposite; *pet.* 5, clawed ..... CARYOPHYLLEÆ. 71.

C. *Ovaries solitary, or many soldered together; placentarium parietal; stamens more than* 10.

Petals 4; *calyx* 2-sepaled; *seeds* many; *stamens* many; *ovary* 1-celled... PAPAVERACEÆ. 82.

Pet. 5; *calyx* 5-sepaled; *caps.* 5-valved; *stamens* many; *leaves* opposite ..... CISTINEÆ. 73.

Pet. 4 to 6, irregular; *cal.* 4 to 6-cut; *stam.* 10 to 20; *ovary* 1-celled; *caps.* gaping RESEDACEÆ. 76.

D. *Ovaries solitary, or many soldered together; placentarium parietal; stamens less than* 10.

Pet. 4, regular; *stam.* 6, 2 short; *cal.* four-sepaled; *ovary* 1; *stem* herb.; *leaves* alternate ..... CRUCIFERÆ. 80.

Pet. 4, irreg., soldered; *stam.* 6, diadelphous; *ovary* 1, 1-celled; *stem* herb..... FUMARIEÆ. 81.

Pet. 5, unequal; *stam.* 5; *caps.* 1-celled, 3-valved; *stem* herb.; *leaves* stipuled.. VIOLACEÆ. 78.

Pet. 5, regular; *stam.* 5; *styles* 5; *cap.* 3 to 5-valved; *perisperm* fleshy DROSERACEÆ. 75.

Pet. 5, equal; *stam.* 5; *styles* 2 to 4; *cap.* 4-valved; *perisperm* 0..... PARNASSIEÆ. 79.

Pet. 5; *stam.* 5 or 6; *style* 1; *stigmata* 3; *cap.* 1-celled, many-seeded.... FRANKENIACEÆ. 74.

Pet. 3, soldered; *stamens* monadelphous; *caps.* 2-celled; *cal.* 5-lobed, unequal POLYGALEÆ. 77.

E. *Ovaries many, or stamens opposite to the petals.*

Ovaries many, 1-celled.... RANUNCULACEÆ. 85.

Ovary 1; *flowers* racemose, bracteated; *stamens* 4 or 5 ..... BERBERIDEÆ. 84.

Ovary 1, many-seeded; *leaves* peltate; *plants* aquatic ..... NYMPHÆACEÆ. 83.

Fam. I. 66. GERANIEÆ.

Calyx persisting, 5-parted, 2 to 5-sepaled; *petals* 4 or 5, hypogynous, clawed, often unequal or irregular; *stamens* hypogynous, 5 to 10; *filaments* unequal, sometimes united at bottom, sometimes without anthers; *ovary* simple, free, 5-sided, often girt with 5 glands; *style* 1; *stigmata* 5; *fruit* simple, 5-celled, or composed of 5 arilles with a long awn; *seeds* single; perisperm 0; corculum bent inwards.—*Stem* herbaceous; *leaves* stipulaceous, alternate, often lobed or many-cut.

Pet. 5, regular; *filam.* 10; *anthers* 5; *awn* bearded on the inside ..... Erodium. 384.

Pet. 5, regular; *anthers* 10; *awn* twisted, not bearded ..... Geranium. 385.

Pet. 4, irregular, upper hoodlike; *anth.* 5, joined; *caps.* 3-celled, many-celled ..... Impatiens. 386.

Pet. 5, equal; *anthers* 10, free;
capsule 5-celled; *calyx* 5-parted ..... OXALIS. 387.

A. GERANIEÆ VERÆ. *Arillus* 1-seeded, awned; *seed* upright; *perisperm* 0; *corculum* bent; *radicle* adverse.

I. 384. ERODIUM. L'Heritier. *Cranes-bill.*

Calyx 5-sepaled; *petals* 5, rarely rather irregular; *stamens* 10; *filaments* 10, sometimes united, 5 with anthers, 5 without; *nectaries* 5, at the base of the antherbearing stamens; *arilles* 1-seeded, awned, at the base of a beaked receptacle; awn spiral, bearded on the inside.

a. *Leaves pinnate; peduncles many-flowered, annual.*

1. *Erodium cicutarium.* *Hemlock cranesbill.*

Stamens hirtous, prostrate; *leaves* pinnate; leaflets sessile, pinnatifidly-cut; *peduncles* many-flowered; *petals* rather unequal, longer than the calyx.

Geranium cicutæ folio inodorum, *Raii Syn.* 357, 2; *Ger. em.* 945, 3.
Geranium moschatum inodorum, *Ger.* 800; *Park.* 708.
Geranium cicutarium, *Lin. S. P.* 951.
Geranium Chærophyllum, *Cavanilles Diss.* 4, 226.
Erodium cicutarium, *L'Heritier in Aiton H. Kew.* 2, 414.

Dry sandy places; annual; July and August.

Root fusiform, white; *stems* many, branched, hairy; *stipules* ovate, acute, scarious; *peduncles* longer than the leaves; *corollæ* purple; *cotyledons* 3-cut.

β. *album.* *Flowers* white, large; *leaves* very hairy, not much cut.

Geranium inodorum album, *Raii Syn.* 357, 3; *Ger. em.* 946, 4.

2. *Erodium pimpinellæfolium.* *Burnet-leaved cranesbill.*

Stem trailing, rather hairy; *leaves* pinnate; leaflets ovate, sessile, deeply toothed; *peduncles* many-flowered; *petals* unequal, smaller than the calyx; *awn* bald.

Geranium pimpinellæ folio, *Dillen in Raii Syn.* 358, 5.
Geranium cicutarium 2, *Withering Bot. Arr.* 752.
Erodium pimpinellæfolium, *Sibthorp Fl. Ox.* 212.

Barren sandy places; annual; April and May.

Stem 6 in. long; *peduncles* nearly radical; *leaflets* sessile, broad at bottom; *petals* small or equal to the calyx, purple, 2 or 3 having a green spot at the bottom; *awn* bald; *cotyledons* heartshape, not 3-lobed.

3. *Erodium moschatum.* *Musk cranesbill.*

Stem trailing; *leaves* pinnate; leaflets oblong, unequal at bottom, slightly petioled, deeply toothed; *peduncles* many-flowered; *petals* equal, as long as the calyx.

Geranium moschatum, *Raii Syn.* 358, 4; *Ger. em.* 941; *Park.* 709; *Lin. S. P.* 951.
Erodium moschatum, *L'Heritier in Aiton H. Kew*, 414.
Muscovy. Moschata. Pick needle. Musky storks-bill.

Hilly pastures; annual; May to October.

Hairs viscous; *odour* like musk; *leaves* elliptical, oblique at bottom; *peduncles* short, 4 to 10-flowered; *awns* hairy; *cotyledons* pinnatifid.

b. *Leaves lobed; peduncles 2 or 3-flowered; perennial.*

4. *Erodium maritimum.* *Sea cranesbill.*

Stem depressed; *leaves* heartshape, deeply crenate; *peduncles* 2 to 4-flowered; *awn* bald.

Geranium pusillum supinum, altheæ aut betonicæ folio, nostras, *Raii Syn.* 356, 1.
Geranium maritimum, *Lin. S. P.* 951.
Erodium maritimum, *L'Heritier in Aiton H. Kew.* 2, 416.

Sandy sea-shore; perennial; May to September.

Stem broad, depressed, branchy; *petioles* long; *leaves* hispid; *corolla* flesh-coloured.

II. 385. GERANIUM. Dioscorides. *Geranium.*

Calyx 5-sepaled; *petals* 5, regular; *stamens* 10, monadelphous, 5 alternately longer, with a nectariferous gland at the base; *arilles* 5, 1-seeded, at the base of a beaked receptacle; *awn* convolute, not bearded on the inside.

a. *Peduncle 1-flowered; petals notched.*

1. *Geranium sanguineum.* *Bloody geranium.*

Leaves orbicular, 5-parted; lobes 3-cut; *peduncles* one-flowered; *fruit* bristly at the tip.

Geranium hæmatodes, *Raii Syn.* 360, 14; *Park. Par.* 229.
Geranium sanguinarium, *Ger. em.* 945.
Geranium sanguineum, *Lin. S. P.* 958.
Bloody cranesbill.

Limestone rocks and heaths; perennial; July to Sept.

Root woody; *stem* weak, prostrate or ascending, hairy; *leaves* 3 to 7-cut; lobes 3-cut or pinnatifid; *peduncle* very long; *sepales* awned, hairy, 5-ribbed; *petals* pale red, veined, very large; *fruit* smooth; *seed* slightly wrinkled.

β. *majus.* *Leaves* large, pale, deeply divided.

Geranium hæmatodes foliis majoribus, pallidioribus et altius incisis, *Raii Syn.* 360, 15.

γ. *Lancastrense.* *Plant* smaller; *stem* knotted, knots inflated; *leaves* opposite, deeply 5-lobed; lobes 3-cut; *corolla* small, pale flesh-colour or white, veined with red.

Geranium hæmatodes Lancastrense flore eleganter striato, *Raii Syn.* 360, 16.
Geranium Lancastrense, *With. Bot. Arr.* 600.
Geranium prostratum, *Cavanilles Diss.* 196.

Sandy shores of the sea.

b. *Stem upright; peduncles 2-flowered; petals notched; perennial.*

2. *Geranium Pyreniacum.* *Pyrenean geranium.*

Stem upright, branched; *peduncles* 2-flowered; *leaves* kidneyshape, 5 to 7-lobed; lobes oblong, blunt, 3-cut, crenate; *petals* notched; *arilles* downy: *seeds* smooth.

Geranium pyreniacum, *Lin. Mant.* 97 and 257.

Fields and pastures; perennial; July.

Root tuberous; *stem* 3 feet high; *leaves* opposite, hirsute, *calyx* awned; *petals* twice as long as the calyx, deeply 2-cut, purple, rarely white, hairy at bottom; *anthers* sometimes only 5.

3. *Geranium nodosum.* *Knotty geranium.*

Stem 4-sided, upright; *peduncles* 2-flowered; *petals* notched; *stem-leaves* 3-lobed, serrated; lobes oblong, pointed; *fruit* smooth, hairy.

Geranium nodosum Plateau, *Raii Syn.* 361, 20; *Ger. em.* 947, 2.
Geranium nodosum, *Lin. S. P.* 953.
Knotty cranesbill.

Mountains; perennial; May to August.

Root tuberous; *stem* spreading; joints swelled, reddish; *leaves* opposite, shining; *peduncles* very long; *calyx* awned: *petals* red.

4. *Geranium sylvaticum.* *Wood geranium.*

Stem upright, corymbose; *leaves* nearly peltate, 5-lobed, deeply serrate; *peduncles* 2-flowered; *petals* slightly notched; *filaments* awlshape; *fruit* hairy.

Geranium batrachoides montanum nostras, *Raii Syn.* 361, 18.
Geranium batrachoides alterum, *Ger. em.* 942, 2.
Geranium batrachoides minus, *Park.* 704.
Geranium sylvaticum, *Lin. S. P.* 954.
Geranium palustre, *Rose Elem. Bot.* 441.

Mountainous woods; perennial; June and July.

Root woody; *stem* 3 feet high; *leaves* petioled, soft, hairy, paler underneath; *bracteæ* lanceolate; *calyx* awned; *petals* purple, veined with blood-red, hairy at bottom; *arilles* keeled, not wrinkled; *seeds* dotted.

β. *minus*. *Plant* small; *flowers* very large.

c. *Stem upright; peduncles 2-flowered; petals not notched; perennial.*

5. *Geranium pratense.* *Meadow geranium.*

Stem upright, hairy; hairs bent back; *peduncles* two-flowered; *leaves* peltate, many-parted, wrinkled, pointed; *petals* not nicked; *filaments* bristlelike, deltoid at bottom; *arille* and *awn* hairy.

Geranium batrachoides, *Raii Syn.* 360, 17.
Geranium batrachioides, *Ger. em.* 942, 1.
Geranium batrachoides flore cæruleo, *Park. Par.* 228.
Geranium pratense, *Lin. S. P.* 954.
Crowfoot cranes-bill.

Damp fields; perennial; June and July.

Stem 3 feet high, woolly; *peduncles* short; *calyx* awned; *petals* very large, blue; *seeds* dotted.

6. *Geranium phæum.* *Blood-red geranium.*

Stem upright, panicled; *peduncles* upright, solitary, two-flowered; *calyx* hairy, slightly awned; *arilles* keeled, hispid at the bottom, plaited across at the tip.

Geranium montanum fuscum, *Dillen in Raii Syn.* 361, 21.
Geranium batrachioides pullo flore, *Ger. em.* 942, 3.
Geranium pullo flore, *Park.* 704.
Geranium phæum, *Lin. S. P.* 953.
Dusky cranesbill.

Mountainous pastures; perennial; May and June.

Stem 2 feet high; joints large, red; *radical leaves* petioled, many-cut; upper leaves sessile, 3-cut; *peduncles* opposite to the leaves; *petals* blackish red; claw white.

d. *Stem weak; peduncles 2-flowered; petals not notched; annual.*

7. *Geranium Robertianum.* *Robert geranium.*

Leaves ternate and quinate, 3-cut, pinnatifid; *peduncles* 2-flowered; *calyx* awned, 10-angled; *petals* not notched, twice as long as the calyx; *arilles* reticulated.

Geranium Robertianum, *Raii Syn.* 358, 6; *Ger. em.* 939, 1; *Lin. S. P.* 955.
Geranium Robertianum vulgare, *Park.* 710.
Herb Robert. Stork bill.

Walls and banks; annual; May to October.

Root fibrous; *stem* trailing, reddish; *leaves* 5-angled, shining; *petals* purple, rarely white; *seeds* very smooth.—Herb infused as tea celebrated in nephritic and calculous complaints.

β. *lucidum. Herb* shining; *leaves* small, deeply cut.
Geranium lucidum saxatile, foliis geranii Robertiani, *Raii Syn.* 358, 7.

8. *Geranium lucidum.* *Shining geranium.*
Leaves 5-lobed, shining, thin, kidneyshape, rounded; *peduncles* 2-flowered; *calyx* pyramidal, wrinkled across; *arilles* many-furrowed.
Geranium saxatile, *Raii Syn.* 361, 19; *Ger. em.* 938, 3; *Park.* 707.
Geranium lucidum, *Lin. S. P.* 955.

Walls and pastures: annual; May to July.

Stem weak, brittle, much branched, bald; *calyx* bald; *petals* slender, rose-colour, rarely white; *arilles* reticulated; *seed* very smooth.

9. *Geranium rotundifolium.* *Roundleaved geranium.*
Leaves kidneyshape, lobed, clothlike; *peduncles* 2-flowered; *calyx* awned; *petals* not nicked, as long as the calyx; *arilles* reticulated, hirsute; *seeds* reticulated.
Geranium columbinum majus flore minore cæruleo, *Raii Syn.* 358, 8.
Geranium columbinum, *Ger. em.* 938, figure.
Geranium rotundifolium, *Lin. S. P.* 957.

Walls and sandy places; annual; May and June.

Stem much branched; *flowers* small; *corolla* rose-red; *arilles* keeled; *hairs* spreading.

e. *Stem upright; peduncles 2-flowered; petals 2-cut, annual.*

10. *Geranium molle.* *Soft geranium.*
Peduncles 2-flowered; *leaves* kidneyshape, clothlike, lobed; lobes 3-cut; *calyx* not awned; *petals* notched, as long as the calyx; *arilles* bald, wrinkled across; *seeds* smooth.
Geranium columbinum, *Raii Syn.* 359, 10; *Ger. em.* 938, description.
Geranium columbinum vulgare, *Park.* 706.
Geranium molle, *Lin. S. P.* 955.
Dove's foot. Pigeon's foot.

Walls and pastures; annual; April to October.

Root fusiform; *stems* many, ascending, hairy; *leaves* alternate, downy, down very soft; *peduncles* opposite to the leaf; *flowers* small; *corolla* purple, rarely white.

11. *Geranium pusillum.* *Pigmy geranium.*

Peduncles 2-flowered; *calyx* awnless; *petals* scarce as long as the calyx; *leaves* kidneyshape, 5 to 7-lobed; lobes 3-parted; *arilles* hairy; *seeds* smooth.

Geranium pusillum, *Lin. S. P.* 957.
Geranium molle β, *Hudson Fl. Angl.* 303.
Geranium parviflorum, *Curtis Fl. Lond.*
Geranium malvæfolium, *Withering Bot. Arr.* 603.
Geranium malvaceum β, *Burmann Geran.* 25.

Ruins and waysides; annual; July and September.

Stem 1 foot high; *leaves* deeply lobed; *anthers* only 5; *arilles* keeled, hairs pressed close.

β. *humile.* *Stem* very short; *leaves* opposite, small; *corolla* very small.

Geranium columbinum humile flore cæruleo minimo, *Dillen in Raii Syn.* 359, 9.
Geranium malacodes seu columbinum minimum, *Park.* 707.
Geranium humile, *Cavanilles Diss.* 202.
Geranium pusillum, *Burmann Geran.* 27.

12. *Geranium columbinum.* *Dove geranium.*

Peduncles longer than the leaves, 2-flowered; *leaves* five-parted; lobes many-cut, segments linear; *calyx* awned; *petals* notched, as long as the calyx; *arilles* bald, smooth; *seeds* wrinkled.

Geranium columbinum dissectis foliis, pediculis florum longissimis, *Raii Syn.* 359, 12.
Geranium columbinum, *Lin. S. P.* 956.

Gravelly and chalky soils; annual; June and July.

Stem slender, spreading; stem-bristles bent down; leaf-bristles pressed close; *calyx* pyramidal; *sepales* 3-ribbed; *petals* rose-red; *arilles* keeled; *seeds* reticulately dotted.

13. *Geranium dissectum.* *Cutleaved geranium.*

Peduncles shorter than the leaves, 2-flowered; *leaves* 5-parted; lobes 3-cut and pinnatifid; *calyx* awned; *petals* notched, as long as the calyx; *arilles* hairy; *seeds* wrinkled.

Geranium columbinum majus foliis dissectis, *Raii Syn.* 359, 1; *Ger. em.* 938, 2.
Geranium malacoides laciniatum seu columbinum alterum, *Park.* 706.
Geranium dissectum, *Lin. S. P.* 956.
Great dove's-foot.

Ruins and barren places; annual; May and June.

Stem hirsute; hairs bent down; *sepales* 3-ribbed; *petals* purple; *anthers* purple; *arilles* scarcely keeled, hairy; hairs spreading; *seeds* reticulately dotted.

β. *majus*. *Plant* large.

Geranium columbinum maximum, foliis dissectis, *Raii Syn.* 360, 13.

B. Balsamineæ. *Capsule* 3-celled, many-seeded; *perisperm* 0; *corculum* straight; *radicle* above.

III. 386. IMPATIENS. Dodonæus. *Touch-me-not.*

Calyx 2-leaved, very small; *petals* 4, hypogynous, irregular, unequal; upper petals arched, lower with a short spur; *stamens* 5; *anthers* united; *capsule* oblong, 5-celled, 5-valved, many-seeded; valves twisted spirally, opening elastically.

Impatiens palustris. *Marsh touch-me-not.*

Joints of the stem swelled; *leaves* ovate, obtusely serrated; *peduncles* many-flowered, solitary.

Balsamine lutea, sive Noli me tangere, *Raii Syn.* 316.

Persicaria siliquosa, *Ger. em.* 446, 4.

Mercurialis sylvestris, Noli me tangere dicta, sive Persicaria siliquosa, *Park.* 296.

Impatiens Noli tangere, *Lin. S. P.* 1329.

Yellow balsam. Quick in hand.

Damp fields; annual; August.

Herb juicy, pale, pellucid, bald, much branched; *leaves* alternate; *peduncles* axillary, 3 or 4-flowered; *flowers* yellow, dotted with red; *spur* turned back at the tip.—Plant acrid.

C. Oxalideæ. *Capsule* 5, many-seeded; *seeds* covered with an arille; *perisperm* fleshy; *corculum* straight, central; *radicle* above; *cotyledons* leaflike.

IV. 387. OXALIS. Dioscorides. *Wood-sorrel.*

Calyx persistent, 5-parted; *petals* 5, hypogynous, equal, regular; *stamens* 10; *filaments* nearly joined at bottom, alternately shorter; *anthers* free; *capsule* short, oblong, 5-sided, 5-celled; cells 1 or many-seeded.

1. *Oxalis vulgaris*. *Common wood-sorrel.*

Root toothed, scaly; *stem* 0; *peduncles* radical, longer than the leaves, 1-flowered; *leaves* ternate, reverse-heart-shape, hairy; *style* as long as the interior stamens.

Oxys alba, *Raii Syn.* 281,* 1; *Ger. em.* 120, 1.
Trifolium acetosum vulgare, *Park.* 746.
Oxalis Acetosella, *Lin. S. P.* 620.
Wood sowr. Sowr trefoil. Stubwort. Alleluja. Sorrel du bois. Cuckoo bread.

Woods; perennial; April and May.

Root fleshy, horizontal; *leaflets* slightly petioled, coloured beneath, edge not cut; *scape* bracteated above the middle; *petals* flesh-coloured with red lines; *seeds* 2 in each cell.—Juice contains much oxalate of potash, which renders it gratefully acid, and may be separated by crystallization; leaves in infusion cooling, and make an agreeable whey.

β. *cærulea.* *Plant* small, rather villous; *petals* bluish purple.

Oxys q. Trifolium acetosum vulgare, flore purpureo Merreti, *Dillen in Raii Syn.* 281,* 2.

2. *Oxalis stricta.* *Stiff wood-sorrel.*

Stem upright, branched; *peduncles* umbell-bearing, shorter than the petioles; *leaves* ternate, reverse-heartshape; *petioles* half-round; *stipules* 0; *petals* blunt; *style* as long as the interior stamens.

Oxalis stricta, *Lin. S. P.*

Cultivated grounds, naturalized; annual; July and Aug.

Leaves rather bald; *corolla* yellow.

3. *Oxalis corniculata.* *Horn wood-sorrel.*

Stem branched trailing, rooting; *peduncles* rather umbelled, shorter than the petioles; *leaves* ternate, reverse heartshape; *petioles* stipuled; *styles* as long as the interior stamens.

Oxys lutea, *Ger. em.* 1202.
Oxalis corniculata, *Lin. S. P.* 623.
Oxalis pusilla, *Salisb. Tr. Lin. Soc.* 2, 243.
Yellow wood-sorrel.

Ruins and dunghills; naturalized? annual; May to Oct.

Stem roundish, reddish; *leaves* hairy; *stipules* growing to the petiole; *flowers* small; *corolla* yellow; *cells* of the capsules many-seeded.

Fam. II. 67. HYPERICINEÆ.

Calyx 1-sepaled, 4 or 5-parted; *petals* 4 or 5, hypogynous; *stamens* hypogynous, many, indefinite, polyadelphous; *ovary* free; *styles* 3 to 5; *fruit* many-celled, rarely fleshy and 1-celled, mostly capsular, 3 to 5-celled, 3 to 5-valved;

edges of the valves bent inwards; *perisperm* 0; corculum straight, radicle above.—*Stem* herbaceous or undershrubby; *leaves* opposite, often glandular; *corollæ* yellow.

Androphores 5; *styles* 3;
berry 1-celled ..... ANDROSÆMUM. 388.
Androphores 3 or 5; *styles* 3 or 5;
capsule 3 or 5-celled ..... HYPERICUM. 389.

I. 388. ANDROSÆMUM. Dioscorides. *Tout-sain.*

Calyx 5-cut; *petals* 5; *stamens* in 5 bundles; *styles* 3; *berry* 1-celled; *placentaria* ternate, affixed to the sides of the berry by means of a membrane, at first entire, afterwards 2-parted.

Androsæmum officinale. *Shop tout-sain.*

Stem shrubby, 2-edged; *leaves* ovate, sessile; *flowers* terminal; *sepales* unequal, roundish, ovate, blunt.

Hypericum maximum Androsæmum vulgare dictum, *Raii Syn.* 343, 6.
Clymenon Italorum, *Ger. em.* 543, 1.
Androsæmum vulgare, *Park.* 575.
Hypericum Androsæmum, *Lin. S. P.* 1102.
Androsæmum vulgare, *De Cand. Fl. Gall.* 4570.
Tutsan. Park-leaves.

Stem forked, bald; *leaves* at first green, afterwards dark red, stipuled, edge not cut; *flowers* cymose; *corolla* golden yellow; *berry* elliptic, at first red, then black.—Juice of the leaves, when dark red, resembles claret; leaves used as a dressing to wounds and ulcers.

II. 389. HYPERICUM. Dioscorides. *St. John's-wort.*

Calyx 5-cut; *petals* 5; *stamens* in 3 or 5 bundles; *styles* 3 or 5; *capsule* 3 or 5-celled.—*Flowers* yield a blood red juice when bruised.

a. *Styles* 5; *capsule* 5-*celled*; *calyx-lobes bald, edge not cut.*

1. *Hypericum calycinum.* *Cup St. John's-wort.*

Stem shrubby, branchy, 4-sided; *leaves* oblong, 2-rowed; *flowers* solitary, terminal; *calyx-lobes* blunt; *styles* 5.

Hypericum calycinum, *Lin. Mant.* 106.

Woods; naturalized; shrubby; July to September.

Stem 1 foot high; branches simple, square, terminated by a flower, leafy; *flowers* very large; *petals* golden yellow.

b. *Styles* 3; *capsules* 3-*celled*; *calyx-lobes not cut.*

2. *Hypericum quadrangulare. Four-angled St. John's-wort.*
Stem 4-sided, rather branched; *leaves* ovate, dotted, dots transparent; *calyx-lobes* lanceolate, pointed.

Hypericum Ascyron dictum caule quadrangulo, *Raii Syn.* 34, 7.
Ascyron, *Ger. em.* 542, 1.
Ascyron vulgare, *Park.* 575.
Hypericum quadrangulum, *Lin. S. P.* 1104.
Hypericum quadrangulare, *Lin. Syst. Veg. ed.* 14, 701.
St. Peter's wort. Hard hay. Great St. John's wort.

Damp hedges and river-sides; perennial; July and Aug.
Root creeping; *stem* stiff; *leaves* in pairs, decussating; edge black, not cut; *flowers* terminal; *corolla* yellow, sometimes spotted with black.

3. *Hypericum dubium. Doubtful St. John's-wort.*
Stem scarcely 4-sided; *leaves* blunt, not dotted; *calyx-lobes* elliptical, blunt.

Hypericum dubium, *Leers Fl. Herb.* 165.
Hypericum Delphinense, *Villars Delph.* 3, 497.

Mountain fields and hedges; perennial; July and Aug.
Root creeping; *shoots* bright, scarlet; *leaves* slightly spotted at the edge; *petals* not notched, yellow streaked with dark purple.

4. *Hypericum perforatum. Perforated St. John's-wort.*
Stem 2-edged; *leaves* blunt, dotted; dots transparent; *calyx-lobes* lanceolate, acute.

Hypericum, *Raii Syn.* 342, 1; *Ger. em.* 539, 1.
Hypericum vulgare, *Park.* 572.
Hypericum perforatum, *Lin. S. P.* 1105.
St. John's wort. St. John's grass.

Woods and hedges; perennial; July and August.
Root creeping; *stem* upright; *leaves* elliptic, oblong, blunt, edge black; *panicle* terminal; *petals* golden with purple spots and lines, crenated; *anthers* glandular.—Sprigs used to keep fiends and evil spirits out of houses; leaves vermifuge; flowers tinge spirit and oil purple; herb in flower infused in oil forms an excellent vulnerary balsam.

5. *Hypericum humifusum. Trailing St. John's-wort.*
Stem 2-edged, trailing, herbaceous; *leaves* oblong, blunt; *flowers* terminal nearly corymbose, and axillary solitary; *calyx-lobes* oblong, obtuse.

Hypericum minus supinum, *Raii Syn.* 343, 3; *Park.* 572.
Hypericum supinum glabrum, *Ger. em.* 541.

Woods and pastures; perennial; July.

Root fibrous; *stems* many, threadshape; *leaves* rarely 3 in a whirl; *flowers* pedicelled; *petals* golden, smaller than the calyx-lobes; *anthers* not glandular.

c. *styles* 3; *capsule* 3-*celled*; *calyx-lobes toothed or glandular.*

6. *Hypericum montanum.* *Mountain St. John's-wort.*

Stem round, upright; *leaves* oblong, embracing the stem, without dots; edge black spotted; *flowers* corymbose panicled, terminal; *calyx-lobes* lanceolate, acute, serrated, glandular.

Hypericum elegantissimum non ramosum folio lato, *Raii Syn.* 343, 5.
Androsæmum Matthioli, *Park.* 575.
Hypericum montanum, *Lin. S. P.* 1105.

Mountain woods; perennial; July.

Root creeping; *stem* 2 feet high, simple, stiff; *panicle* contracted; *petals* lanceolate, light yellow.

7. *Hypericum barbatum.* *Bearded St. John's-wort.*

Stem upright, rather angular; *leaves* ovate, bald, black, dotted; *calyx* and *petals* fringed, dotted.

Hypericum barbatum, *Jacquin Fl. Austr.* 259.

Coppices; perennial; September and October.

Stem bald, stiff, branched at top; *leaves* spotted on both sides, spots dark purple, glandular; *panicles* forked; *petals* yellow, reverse ovate.

8. *Hypericum pulchrum.* *Handsome St. John's-wort.*

Stem round, upright; *leaves* heartshape, embracing the stem, bald; *calyx-lobes* blunt, serrated, glandular.

Hyericum pulchrum Tragi, *Raii Syn.* 342, 2; *Ger. em.* 540, 5.
Hypericum pulchrum, *Lin. S. P.* 1106.

Woods on clay soils; perennial; July.

Stem 18 in. high, reddish, bald; branches barren; *leaves* dotted, beneath glaucous; *panicle* stiff; *petals* gold-yellow, red on the outside.

9. *Hypericum hirsutum.* *Hairy St. John's-wort.*

Stem round, upright, downy; *leaves* oblong, narrow at bottom, spotted; dots transparent, downy beneath; *calyx-lobes* serrated glandular.

Hypericum Androsæmum dictum. *Raii Syn.* 343, 4.
Hypericum hirsutum, *Lin. S. P.* 1105.

Woods and hedges on chalk; perennial; June and July.
Stem stiff, branched; *leaves* ribbed; *panicle* many-flowered; *flowers* small; *corolla* gold-yellow.

10. *Hypericum elodes.* *Woolly St. John's-wort.*
Stem round, creeping, villous; *leaves* roundish, ovate, sessile downy; *panicle* few-flowered; *calyx-lobes* serrated, glandular, bald.

Hypericum q. Ascyron supinum villosum palustre, C. Bauhini, *Raii Syn.* 344, 8.
Hypericum tomentosum, *Ger. em.* 540, 3.

Spongy bogs; perennial; July and August.
Root fibrous; *stem* procumbent; *leaves* ribbed, from the base; *panicle* terminal becoming lateral, forked; *petals* yellow, with green ribs; *nectaries* 3, glandular, between the androphores.

Fam. III. 68. ACERINEÆ. Jussieu. *Acera* De Candolle.

Calyx 1-leafed, persisting, 5-cut; *petals* 5, clawed, on a hypogynous disk, alternate with the calyx-lobes, or 0; *stamens* definite on the disk; *ovary* free, simple, or many soldered; *style* 1; *stigmata* 2; *capsule* 2-celled, cells one-seeded; *perisperm* 0, radicle prone in the lobes, ascending; cotyledons leaflike.—*Stem* arborescent; *leaves* opposite, mostly palmately ribbed.

390. ACER. Pliny. *Maple.*
Calyx 5-parted; *petals* 5; *stamens* 8; *ovary* 2-lobed; *style* 1; *stigmata* 2, pointed; *samares* 2, united at their base, 1-celled, winged with a membrane, 1 or 2-seeded.

1. *Acer majus.* *Great maple.*
Leaves 5-lobed, unequally serrated, obtuse; *racemes* hanging, rather tomentose.

Acer majus, *Raii Syn.* 470, 1; *Ger. em.* 1484, 1.
Acer majus latifolium, Sycamorus falso dictum, *Park.* 1425.
Acer Pseudo-platanus, *Lin. S. P.* 1495.
Sycamore. Maple.

Woods and hedges near houses; naturalized; tree; May.
Trunk straight; branches smooth; twigs depending; *leaves* bald, paler beneath; *flowers* green, sometimes barren; *filaments* mostly bald, rarely hairy; *pollen* globular, when burst by moisture 4-valved; *ovary* very hairy; *stigmata* downy.—Wood soft, very white, used for turnery work; juice saccharine, affords sugar by evaporation.

β. *glaucum*. *Leaves* glaucous beneath; serratures distinct; *filaments* hirsute.

2. *Acer campestre*. *Field maple.*

Leaves 5-lobed, blunt, bald; *racemes* upright; bark corklike, wrinkled.

Acer minus, *Raii Syn.* 470, 2; *Ger. em.* 1484, 2; *Lin. S. P.* 1497.
Acer minus et vulgare, *Park.* 1426.
Common maple.

Hedges; tree; May and June.

Branches spreading; *racemes* terminal, branched; *flowers* greenish; *stamens* yellow; *samara-wing* much spread, reddish.

β. *rubens*. *Plant* smaller; *samara* villous, reddish; wing purplish.

Acer campestre et minus, fructu rubente, *Raii Syn.* 470, 3.

Fam. IV. 69. TILIACEÆ.

Calyx many-sepaled, or many-parted; *petals* hypogynous, definite, alternate with the calyx-lobes; *stamens* hypogynous, indefinite, mostly distinct; *ovary* simple, free; *fruit* 1 or many-celled, berried or capsular, 1 or many-seeded; *seed* peritropal; perisperm fleshy; corculum rather bent inwards, flat; cotyledons leaflike; radicle below.—*Stem* arborescent; *leaves* alternate, simple, stipuled; *flowers* corymbose.

391. TILIA. Pliny. *Linden.*

Calyx deciduous, 5-parted; *petals* 5; *stamens* many; ovary globular, hirsute; *style* threadlike; *stigma* capitate, 5-toothed; *carcerule* 5-celled; cells 2-seeded, becoming 1-celled, 1-seeded.—*Flowers* corymbose; *bracteæ* adnate to the peduncle.

1. *Tilia parvifolia*. *Small-leaved linden.*

Leaves heartshape, roundish, pointed, acutely serrated; *carcerule* nearly globose, scarcely ribbed, very thin, brittle.

Tilia folio minore, *Raii Syn.* 473, 2.
Tilia fœmina minor, *Park.* 1407.
Tilia parvifolia, *Ehrhart.*
Tilia microphylla, *De Candolle Fl. Gall.* 4508.
Tilia Europæa, *Persoon Syn.* 2, 66.
Tilia Europæa β, *Smith Fl. Brit.* 571.
Small-leaved lime tree. Bast tree.

Woods; arborescent; August.

Leaves villous, glaucous beneath.

2. *Tilia platyphylla.* *Broadleaved linden.*

Leaves heartshape, roundish, pointed, unequally serrated; *carcerule* topshape, woody, thick; ribs prominent.

Tilia vulgaris platyphyllos, *Raii Syn.* 473, 1.
Tilia fœmina, *Ger. em.* 1298, 1.
Tilia fœmina major, *Park.* 1407.
Tilia Europæa, *Lin. S. P.* 733.
Tilia platyphylla, *De Candolle Fl. Gall.* 4504.
Lime tree. Female lime tree. Bast.

Woods and hedges; arborescent; July.

Branches smooth; *leaves* bald, villous beneath the ribs and veins; *peduncles* axillary, corymbose; *flowers* sweet-scented, yellowish.—Plant bears cutting; bark fibrous, affording coarse lines by maceration; wood soft, without knots, used for carved and turnery work, and to cut upon; leaves used as fodder for cattle; flowers in infusion a pleasant antispasmodic; fruit affords a buttery substance resembling chocolate.

β. *rubra.* *Leaves* hairy; *twigs* red; *carcerules* 4-angled.

Tilia foliis molliter hirsutis, viminibus rubris, fructu tetragono, *Raii Syn.* 473, 3.
Red lime.

γ. *ulmifolia.* *Leaves* like those of the elm; *carcerules* 6-sided.

Tilia ulmifolia, semine hexagono, *Dillen in Raii Syn.* 473, 4.

Fam. V. 70. MALVACEÆ.

Calyx mostly double; inner calyx 1-leaved; outer 1 or many-sepaled; *petals* hypogynous, regular, often soldered to the lower part of the tube of the stamens, rather cohering at bottom; *stamens* hypogynous, indefinite, monadelphous; *androphore* tubular, petal-bearing, divided at top; *anthers* kidneyshape; *ovary* free, simple, often lobed; *style* 1, sheathed by the androphore; *stigmata* many; *fruit* (in natives) many-coqued; *coques* 1-seeded, not opening; *perisperm* 0, or very thin, mucilaginous; corculum curved; cotyledons leaflike, plaited.—*Stem* herbaceous or undershrubby; *leaves* alternate, simple, stipuled; *flowers* axillary.

Outer calyx 3-sepaled ..... Malva. 392.
Outer calyx 6 to 9-cut ..... Althæa. 393.
Outer calyx 3-cut ..... Lavatera. 394.

I. 392. MALVA. Pliny. *Mallow.*

Calyx double; inner 5-cut; outer 3-sepaled; *coques* many, in a circle, 1-seeded, not opening.

a. Malva. *Peduncles axillary, crowded.*

1. *Malva rotundifolia.* *Round-leaved mallow.*

Stem prostrate; *leaves* heartshape, orbicular, slightly 5-lobed; peduncles when in fruit declining.

Malva sylvestris minor, *Raii Syn.* 251, 2; *Park.* 299.
Malva sylvestris pumila, *Ger. em.* 930, 2.
Malva rotundifolia, *Lin. S. P.* 969.
Dwarf mallow. Mauls.

Ruins and waysides; annual; July.

Root branched; *stems* many, mostly simple; *petals* flesh-colour, longer than the calyx.

β. *pusilla.* *Petals* scarcely longer than the calyx; *leaves* 5-lobed, lobes deeply cut.

Malva minor, flore parvo cæruleo, *Dillen in Raii Syn.* 251, 3.
Malva parviflora, *Hudson Fl. Angl.* 307.
Malva pusilla, *Engl. Bot.* 241.

2. *Malva vulgaris.* *Common mallow.*

Stem upright, herbaceous; *leaves* 7-lobed, pointed; *petioles* and *peduncles* hairy.

Malva vulgaris, *Raii Syn.* 251, 1; *Park.* 299.
Malva sylvestris, *Ger. em.* 930, 1; *Lin. S. P.* 969.

Uncultivated places; perennial; May to August.

Root fusiform, white; *stem* branched; *leaves* rather rough, sometimes variegated; upper nearly palmate; *calyx* hispid; *petals* purple, reverse heartshape, 3 times as long as the calyx.—Yields very fine fibre.

b. Alcea. *Peduncles axillary, solitary.*

3. *Malva moschata.* *Musk mallow.*

Stem upright; hairs simple, tubercular at bottom; *root-leaves* kidneyshape, cut; stem-leaves 5-parted, pinnately many-cut; *outer-calyx-sepales* linear, acute, hairy.

Alcea vulgaris, *Raii Syn.* 252, 1, omitting the synonyms.
Alcea tenuifolia crispa, *Dillen in Raii Syn.* 253, 2.
Malva moschata, *Lin. S. P.* 971.

Edges of fields and waysides; perennial; July and Aug.

Root woody; *stem* branched; *herb* rough with hairs, odorous; *petals* large, rose-red, rarely white.

II. 393. ALTHÆA. Dioscorides. *Marsh-mallow.*

Calyx double; inner 5-cut; outer deeply 6 or 9-cut; *coques* many, not margined, 1-seeded.

1. *Althæa officinalis.* *Shop marsh-mallow.*

Leaves tomentose, oblong, ovate, nearly 3-lobed, toothed.

Althæa vulgaris, *Raii Syn.* 252, 1; *Park.* 303.
Althæa, Ibiscus, *Ger. em.* 933, 1.
Althæa officinalis, *Lin. S. P.* 966.
Wymote.

Salt marshes; perennial; July to September.

Root fusiform; *herb* velvetty, hairs stellate, interwoven; *stem* upright, simple; *outer calyx* 10 or 12-cut; *petals* flesh-colour, fringed at bottom.— Plant mucilaginous, mild, used in infusion, and externally in poultices.

β. *rotundifolia.* *Leaves* blunt.

Althæa vulgari similis, folio retuso brevi, *Raii Syn.* 252.

2. *Althæa hirsuta.* *Hairy marsh-mallow.*

Leaves heartshape, blunt, 5-lobed, bald above; *stem* hirsute.

Althæa hirsuta, *Lin. S. P.* 966.

Fields; perennial; August.

III. 394. LAVATERA. Tournefort. *Lavatera.*

Calyx double; inner calyx 5-cut; outer 3-cut; *coques* many, 1-seeded.—*Hairs* radiating, or in bundles.

Lavatera arborea. *Tree lavatera.*

Stem herbaceous, upright; *leaves* 7-angled, velvetty, plaited; *peduncles* axillary, crowded, 1-flowered.

Malva arborea marina nostras, *Raii Syn.* 252, 4; *Park.* 301.
Lavatera arborea, *Lin. S. P.* 972.
English sea tree mallow. Velvet leaf.

Sea-shore; biennial; July to October.

Stem 6 feet high, naked, leafy at top; *petioles* long; *flowers* numerous, axillary; *outer calyx* very large; inner woolly; *petals* purplish red with dark blotches at the base; *androphore* woolly.

Fam. VI. 71. LINEÆ. De Candolle.

Calyx persisting, 4 or 5-parted; *petals* 5, clawed, alternate with the calyx-lobes; *stamens* 4 or 5, slightly joined at bottom; *scales* 4 or 5, alternating with the filaments; *styles* 4 or 5; *stigmata* 4 or 5; *ovary* free, simple; *capsule* many-celled, many-valved; edge of the valves turned in; *seeds* single, pendent; perisperm 0; corculum straight; cotyledons nearly leaflike; radicle above.

395. LINUM. Theophrastus. *Flax.*

Calyx 5-parted; *petals* 5; *stamens* 5; *styles* 5.

a. *Flowers blue or reddish; leaves alternate.*

1. *Linum usitatissimum.* *Most-common flax.*

Stem mostly single; *leaves* lanceolate, 3-ribbed; *sepales* ovate, acute, 3-ribbed, pointed; *petals* crenate; *capsule* sharp at the tip.

Linum sylvestre sativum plane referens, *Raii Syn.* 362, 2.
Linum sylvestre vulgatius, *Park.* 1334.
Linum, *Raii Syn.* 362, 1.
Linum sativum, *Ger. em.* 556; *Park.* 1335.
Lint. Lyne.

Corn-fields, also cultivated; annual; July.

Root small; *stem* upright, simple at bottom, panicled at top; *petals* reverse ovate, light blue, streaked; *stigmata* clubshaped, obtuse.—Fibres of the stem used for thread and cloth; seeds yield oil, and furnish a pectoral infusion; the farina of the seeds emollient in poultices, as also the ground cake left after pressure of the oil, which last is likewise used to feed broken-winded horses, to fatten cattle, and for manure.

2. *Linum perenne.* *Perennial flax.*

Stems many, ascending; *leaves* linear, lanceolate, 1-ribbed; *sepales* reverse ovate, blunt, 5-ribbed, bald; *capsules* blunt at the tip.

Linum sylvestre cæruleum perenne erectius, flore et capitulo majore, *Raii Syn.* 362, 3.
Linum perenne, *Lin. S. P.* 397.

Chalky hills; perennial; June and July.

Root woody; *stem* ascending, rather branched at top; *leaves* slightly recurved; *petals* notched, blue; *stigmata* capitate, blunt.

β. *procumbens.* *Stem* trailing; *flowers* and *capsules* small.

Linum sylvestre cæruleum perenne procumbens, flore et capitulo minore, *Raii Syn.* 362, 4.

3. *Linum angustifolia.* *Narrow-leaved flax.*

Stems many, ascending; *leaves* linear, lanceolate, 3-ribbed; *sepales* elliptical, 3-ribbed, pointed; *capsules* pointed.

Linum sylvestre angustifolium, floribus dilute purpurascentibus vel carneis, *Raii Syn.* 362, 5.
Linum tenuifolium ζ, *Lin. S. P.* 399.
Linum angustifolium, *Hudson Fl. Angl.* 134.
Linum tenuifolium, *Withering Bot. Arr.* 323.

Sandy and chalky pastures; perennial; July.

Twigs panicled; *leaves* 3 to 5-ribbed: *petals* sometimes notched, sometimes not, light purple; *stamens* short; *stigmata* rather clublike.

b. Chamælinum. *Flowers white; leaves opposite; petals* 5; *stamens* 5.

4. *Linum catharticum.* *Purging flax.*

Stem forked, above; *leaves* opposite, reverse ovate, lanceolate; *sepales* serrated; *petals* acute.

Linum sylvestre catharticum, *Raii Syn.* 362, 6; *Ger. em.* 560, 5.
Chamælinum Clusii flore albo, sive Linum sylvestre catharticum, *Park.* 1336.
Linum catharticum, *Lin. S. P.* 401.
Mill-mountain.

Stem upright, simple at bottom; *flowers* drooping before expansion; *sepales* 1-ribbed, serrated; *stigmata* headed.—Dried plant infused in wine purgative, useful in rheumatism.

c. Radiola. *Flowers white; leaves opposite; petals* 4; *stamens* 4; *styles* 4.

5. *Linum millegranum.* *Thousand-seeded flax.*

Stem very much forked; *leaves* ovate; *petals* reverse-ovate; *sepales* 5-lobed.

Radiola vulgaris serpyllifolia, *Raii Syn.* 345.
Millegrana minima, *Ger. em.* 569, 2.
Millegrana minima, seu Herniaria minor, *Park.* 447.
Linum Radiola, *Lin. S. P.* 402.
Radiola linoides, *Gmel. Syst. Nat.* 2, 269.
Radiola millegrana, *Smith Fl. Brit.* 202.
All-seed. Dwarf all-seed. Least rupture-wort.

Inundations on sand; annual; July and August.

Stem corymbose, 2 inches high; *flowers* solitary, from the forks of the stem; *calyx* 4-cut; *stamens* equal; *stigmata* headed.

Fam. VII. 72. CARYOPHYLLEÆ. Jussieu.

Calyx persisting, 4 or 5-toothed, or 4 or 5-sepaled; *petals* 4 or 5, hypogynous, clawed, alternating with the calyx-lobes; *stamens* twice as many as the petals, rarely equal in number and alternating with them; *ovary* simple, sometimes rather stipitated; *styles* many; *capsules* 1 or many-celled, many-valved, opening at the tip; *seeds* fixed to the bottom of the capsule, or to a central placentarium; peri-

sperm farinaceous involved with the corculum; radicle below.—*Stem* herbaceous or under-shrubby, jointed; *leaves* opposite, not cut.

a. Caryophylleæ veræ. *Calyx tubular, 4 or 5-toothed; stamens* 10; *capsule toothed at the top.*

Cal. scaly at bottom; *styles* 2 ..... DIANTHUS. 397.
Cal. naked, cylindrical; *styles* 2 ..... SAPONARIA. 396.
Cal. naked, cylindrical; *styles* 3 ..... SILENE. 399.
Cal. naked, cylindrical; *styles* 5 ..... LYCHNIS. 400.
Cal. naked, bellied; *styles* 3 or 5;
ovary coloured ..... CUCUBALUS. 398.

b. Alsineæ. *Calyx 4 or 5-sepaled; stamens 3 to* 10.

Capsule 2-valved; *calyx* 4-sepaled;
petals 4; *styles* 2 ..... BUFFONIA. 401.
Caps. 3 or 4-valved; *calyx* 3 or 4-sepaled;
pet. 3 or 4; *stam.* 6 or 8; *styles* 3 or 4.... ELATINE. 402.
Caps. 3-valved; *calyx* 5-sepaled;
pet. 5, notched, small; *stam.* 10; *styles* 3 CHERLERIA. 405.
Caps. 4-valved; *calyx* 4-sepaled;
pet. 0 or 4, small; *stam.* 4; *styles* 4 ..... SAGINA. 403.
Caps. 5-valved; *calyx* 5-sepaled;
pet. 5, not cut; *stam.* 5 or 10; *styles* 5 .. SPERGULA. 404.
Caps. 5-valved; *calyx* 5 sepaled;
pet. 5, not cut; *stam.* 10; *styles* 3 ..... ARENARIA. 406.
Caps. 6-toothed; *calyx* 5-sepaled;
pet. 5, not cut; *stam.* 10; *styles* 3 ..... ALSINELLA. 407.
Caps. 5 or 10-toothed; *cal.* 4 or 5-sepaled;
pet. 5, 2-cut; *stam.* 5 or 10; *styles* 3 ... STELLARIA. 409.
*Caps.*5 or 10-toothed; *cal.* 4 or 5-sepaled;
pet. 5, toothed; *stam.* 3 to 5; *styles* 2.... HOLOSTEA. 408.
Caps. 6-toothed; *cal.* 5-sepaled;
pet. 5, not cut; *stam.* 4; *styles* 4 ..... MŒNCHIA. 410.

A. CARYOPHYLLEÆ VERÆ. *Calyx* tubular, 4 or 5-toothed; *stamens* 10; *capsule* opening at the tip.

I. 396. SAPONARIA. Gesner. *Sopewort.*

Calyx tubular, 5-toothed, base destitute of scales; *petals* 5, clawed, claws as long as the calyx; mouth crowned; limb not notched; *stamens* 10; *styles* 2; *capsule* 1-celled, many-seeded, opening at the top.

Saponaria officinalis. *Shop sopewort.*
Calyx cylindrical, bald; *leaves* ovate, lanceolate.

Lychnis Saponaria dicta, *Raii Syn.* 339, 6.
Saponaria, *Ger. em.* 444, 1.
Saponaria vulgaris, *Park.* 641.
Saponaria officinalis, *Lin. S. P.* 584.
Bruisewort.

Fields and hedges; perennial; August and September.
Roots very long; *stolones* creeping; *leaves* 3-ribbed, connate; *panicle* many-flowered; *flowers* rose-red, odoriferous, rarely double.—Plant bitter, saponaceous, lathering with water, and dissolving grease; decoction used in gonorrhœa and the sequelæ of syphylis, also externally in itch.

β. *convoluta.* *Leaves* convolute.

Lychnis Saponaria dicta folio convoluto, *Raii Syn.* 339, 7.
Gentiana concava, *Ger. em.* 435.
Saponaria Anglica folio convoluto, *Park.* 641.
Hollow-leaved sopewort. *Hollow felwort.*

II. 397. DIANTHUS. Linnæus. *Pink.*

Calyx tubular, 5-toothed; scales 2 or 4, opposite, imbricate at the base; *petals* 5, claws as long as the calyx; *stamens* 10; *styles* 2; *capsules* 1-celled, toothed at the tip.

1. *Dianthus pratensis.* *Meadow pink.*
Flowers aggregate, bundled; *calyx-scales* lanceolate, villous, as long as the calyx.

Caryophyllus latifolius barbatus minor annuus, flore minore, *Raii Syn.* 337, 4.
Caryophyllus pratensis, *Ger. em.* 594, 11.
Caryophyllus pratensis nostras major and minor, *Park.* 1338.
Dianthus Armeria, *Lin. S. P.* 586.
Deptford pink.

Sandy and gravelly pastures; annual; July and August.
Root fusiform; *stem* downy, stiff; *leaves* linear, keeled at bottom, downy; *calyx* downy; *petals* serrated, red, rarely white.

2. *Dianthus prolifer.* *Childing pink.*
Flowers aggregate, headed; *calyx-scales* ovate, blunt, not armed, overtopping the tube.

Caryophyllus sylvestris, prolifer, *Dillen in Raii Syn.* 337, 5.
Armeria prolifera Lobelii, *Ger. em.* 599, 5.
Dianthus prolifera, *Lin. S. P.* 587.
Childing sweet-Williams.

Sandy pastures; annual; July.

Stem mostly simple; *leaves* linear; *head* many-flowered; *calyx-scales*, common very large; proper 2, slender; *petals* notched, small, pale purple, soon withering.

β. *uniflorus*. *Flowers* solitary.

3. *Dianthus caryophylleus*. *Clove pink.*

Flowers solitary; *calyx-scales* 4, very short, ovate, slightly mucronate; *petals* crenated, mouth naked; *leaves* linear, awlshape, channelled, glaucous.

Caryophyllus simplex flore minore pallide rubente, *Raii Syn.* 336, 3.
Cariophyllus sylvestris simplex, *Ger. em.* 591, 1.
Dianthus Caryophyllus, *Lin. S. P.* 587.
Single purple pink. Common pink. Carnation.

Root woody; *stem* branched; *flowers* flesh-colour, odoriferous.—Syrup of the flowers cordial.

β. *minor*. *Plant* smaller; *flowers* white; *petals* acutely crenated, mouth encircled with black.

Dianthus arenarius, *Hudson Fl. Angl.* 185, not of Linnæus.
Pheasants-eye pink.

4. *Dianthus deltoides*. *Delta pink.*

Flowers solitary; *calyx-scales* mostly 2, ovate, lanceolate, acute; *leaves* rather blunt, downy; *petals* crenated; *barren stems* trailing.

Caryophyllus minor repens nostras, *Raii Syn.* 335, 1.
Caryophyllus montanus purpureus, *Ger. em.* 593, 6.
Dianthus deltoides, *Lin. S. P.* 588.
Maiden pink.

Chalky and sandy fields; perennial; July to October.

Roots in tufts; *stem* ascending; *leaves* linear, lanceolate; *flowers* small, rose or flesh-red; mouth naked with a purple ring; *calyx-scales* half as long as the tube.—Used in Hungary to cure intermittent fevers.

β. *glaucus*. *Leaves* glaucous; *calyx-scales* 2 or 4; *flowers* white, without the purple ring.

Dianthus glaucus, *Lin. S. P.* 588.

5. *Dianthus cæsius*. *Gray pink.*

Stem 1 or 2-flowered; *calyx-scales* short, roundish; *petals* crenated, downy; *leaves* rough on the edge.

Caryophyllus q. Armeriæ species flore in summo caule singulari, *Raii Syn.* 336, 2.
Dianthus glaucus, *Hudson Fl. Angl.* 185.
Dianthus virgineus β, *Lin. S. P.* 590.
Dianthus cæsius, *Engl. Bot.* 62.
Mountain pink.

Dry rocks; perennial; June and July.

Root woody; *stem* simple, bald, 1 or 2-flowered; *calyx-scales* one-third the length of the tube; *petals* with purple hairs at the mouth.

III. 398. CUCUBALUS. Pliny. *Spatling-poppy.*

Calyx tubular, inflated, 5-toothed; *petals* 5-clawed; *stamens* 10; *styles* 3 or 5, longitudinally villous on the inside; *ovary* coloured; *capsule* 1-celled.

1. *Cucubalus bacciferus.* *Berry-bearing spatling-poppy.*

Stem weak; *branches* spreading; *flowers* solitary; *calyx* bellshape, downy; *petals* distant; *capsule* globular, fleshy.

Cucubalus Plinii, *Dillen in Raii Syn.* 267, 1.
Alsine baccifera, *Ger. em.* 614, 13.
Cucubalus bacciferus, *Lin. S. P.* 591.
Silene baccifera, *Withering Bot. Arr. ed.* 2, 452.
Silene fissa, *Salisb. Prod.* 302.
Berry-bearing chickweed.

Shady rich land; perennial; June and July.

Root creeping; *stem* much branched, downy; *leaves* spreading, pale green; *flowers* terminal, single, drooping; *petals* slightly toothed at the throat.

2. *Cucubalus inflatus.* *Blown spatling-poppy.*

Stem upright; *flowers* panicled, drooping; *calyx* ovate; *petals* slightly nicked, rather naked; *capsule* ovate.

Lychnis sylvestris, quæ Ben album vulgo, *Raii Syn.* 337, 2.
Behen album, *Ger. em.* 678, 2.
Papaver spumeum, sive Ben album vulgo, *Park.* 263.
Cucubalus Behen, *Lin. S. P.* 591.
Cucubalus inflatus, *Salisb. Prod.* 302.
Silene inflata, *Smith Fl. Brit.* 467, 5.
Bladder campion. Spatling poppy. Frothing poppy. White ben.

Fields and waysides; perennial; July.

Root tufted; *stem* upright, glaucous; *leaves* ovate, lanceolate; *flowers* drooping, white; *calyx* whitish.

β. *hirsutus.* *Stem* and *leaves* hairy; *calyx-teeth* fringed; *petals* small.

3. *Cucubalus maritimus.* *Sea spatling-poppy.*

Stem trailing; *flowers* solitary, or in pairs, terminal; *calyx* ovate; *petals* 2-cut, crowned; *capsule* roundish.

Lychnis maritima repens, *Raii Syn.* 337, 1.
Lychnis marina Anglica, *Ger. em.* 469, 2.
Lychnis marina repens alba, *Park.* 638.
Cucubalus Behen β, *Lin. S. P.* 591.
Silene amœna, *Hudson Fl. Angl.* 188.
Silene maritima, *Withering Bot. Arr.* 414.
Sea campion. Sea catchfly.

Rocks and sands by the sea, or alpine rivers; perennial; August and September.

Root creeping; *stem* tufted, sometimes trailing; *leaves* linear, lanceolate; *flowers* drooping, white.

IV. 399. SILENE. Theophrastus. *Catchfly.*

Calyx tubular, cylindrical or conical, 5-toothed; *petals* 5, claws long, rarely naked, usually crowned with scales, limb often 2-cut; *stamens* 10; *styles* 3; *capsule* 3-celled, 6-valved.

1. *Silene Anglica.* *English catchfly.*

Herb hirsute, viscous; *petals* nicked; *flowers* spiked, lateral flowers upright, alternate; *lower capsules* reflected, spreading.

Lychnis sylvestris flore albo minimo, *Raii Syn.* 339, 10.
Silene Anglica, *Lin. S. P.* 594.
Silene arvensis, *Salisb. Prod.* 301.

Sandy fields; annual; July.

Roots fibrous; *stem* branchy, upright; *leaves* linear, lanceolate; *flowers* solitary, white; *calyx* cylindrical; *capsule* ovate.

2. *Silene quinquevulnera.* *Five-wound catchfly.*

Herb hirsute; *petals* roundish, not cut; *flowers* solitary; lateral flowers alternate; *capsules* upright.

Silene quinquevulnera, *Lin. S. P.* 595.

Sandy fields; annual; June and July.

Root fibrous; *stem* much branched, ascending, weak; *leaves* elliptical, lanceolate; *petal-limb* rounded, not cut, white with a blood-red spot in the centre.

3. *Silene nutans.* *Nodding catchfly.*

Herb downy; *flowers* panicled, facing one way, nodding; *leaves* lanceolate; *petals* 2-parted, lobes linear.

Lychnis sylvestris alba nona Clusii, *Raii Syn.* 340, 11; *Ger. em.* 470, 8.
Lychnis major noctiflora Dubrensis perennis, *Raii Syn.* 340, 12?
Lychnis sylvestris alba, sive Ocymoides minus album, *Park.* 631.
Silene nutans, *Lin. S. P.* 596.
Silene paradoxa, *Lin. S. P.* 1673?
Cucubalus viscosus, *Hudson Fl. Angl.* 186?
Nottingham catchfly. Dover catchfly.

Chalk rocks and buildings; perennial; July.

Root woody; *stems* many, simple, upright; *root-leaves* reverse ovate, crowded; *panicle* forked; *calyx* 10-ribbed; *petals* white; *stamens* 5 long, exserted, 5 short; *capsule* ovate.

4. *Silene parviflora.* *Small-flowered catchfly.*

Plants dioicous; *flowers* panicled; *petals* linear, undivided, wavy, bald, naked.

Lychnis viscosa flore muscoso, *Raii Syn.* 340, 15.
Sesamoides Salamanticum magnum, *Ger. em.* 493, 1.
Muscipula Salamatica major, *Park.* 636.
Silene Otites, *Lin. S. P.* 594.
Spanish catchfly.

Dry sandy and chalky fields; perennial; July and Aug.

Root woody; *stem* upright, panicled above; *peduncles* in whirls, forked; *leaves* petioled, spatulashape, downy; *flowers* small, yellowish green; *calyx* ribbed; petals sometimes 0.

5. *Silene conica.* *Conical catchfly.*

Stem forked; *leaves* lanceolate, downy; *petals* notched, crowned; *calyx* when in fruit conical, 30-streaked.

Lychnis sylvestris angustifolia caliculis turgidis striatis, *Dillen in Raii Syn.* 341, 18.
Lychnis caliculis striatis secunda Clusii, *Ger. em.* 470, 7.
Silene conica, *Lin. S. P.* 598.
Silene conoidea, *Hudson Fl. Angl.* 189.

Sandy fields; annual; July.

Root branched; *stem* upright, forked, downy; *leaves* velvetlike; *flowers* from the forks; *peduncles* upright, solitary; *calyx* membranaceous; *teeth* 5, straight; *petals* rose-red; *capsule* ovate, flaskshape.

6. *Silene noctiflora.* *Nightflowering catchfly.*

Stem forked; *leaves* lanceolate, hairy; *calyx* 10-angled, teeth as long as the tube; *petals* notched, bluntly crowned.

Lychnis noctiflora, *Raii Syn.* 340, 13; *Park.* 632.
Silene noctiflora, *Lin. S. P.* 599.

Sandy fields; annual; July.

Stem upright, branchy, downy; *leaves* dark green; *flowers* from the forks, peduncled, upright; *calyx* viscid; *petals* flesh-colour; *capsule* ovate.

7. *Silene latifolia.* *Broadleaved catchfly.*

Upper leaves heartshape, bald; *panicle* forked, bundled, many-flowered; *petals* notched, acutely crowned.

Lychnis viscosa purpurea latifolia lævis, *Dillen in Raii Syn.* 341, 17.
Muscipula Lobelii, *Ger. em.* 601.
Silene Armeria, *Lin. S. P.* 601.
Catch-fly. Limewort. Lobel's catchfly.

Fields and old walls; annual; July and August.

Stem branched, viscid beneath the joints; *leaves* clasping the stem; lower leaves ovate; *panicle* leafless; *flowers* upright, rose-red; *calyx* 10-angled, teeth rounded; *capsule* elliptical, pedicelled.

8. *Silene alpina.* *Alpine catchfly.*

Stem very short, branched; *leaves* linear, fringed at bottom; *peduncles* solitary, 1-flowered; *petals* slightly notched, crowned.

Lychnis alpina minima, *Raii Syn.* 341, 16.
Caryophyllus pumilio alpinus, *Ger. em.* 593.
Silene acaulis, *Lin. S. P.* 603.
Cucubalus acaulis, *Hudson Fl. Angl.* 187.
Moss campion. Grass-leaved campion.

Alpine rocks; perennial; June and July.

Roots tufted; *stems* trailing; *leaves* crowded, keeled, linear; *peduncles* terminal, angular; *flowers* upright, rose-red; *calyx* 5-ribbed; *capsule* cylindrical.

V. 400. LYCHNIS. Theophrastus. *Lychnis.*

Calyx tubular, 5-toothed; *petals* 5, clawed; *stamens* 10; *styles* 5; *capsules* 1-celled, or apparently 5-celled.

a. Viscaria. *Calyx-teeth short; petals not cut; capsule apparently 5-celled.*

1. *Lychnis angustifolia.* *Narrowleaved lychnis.*

Stem jointed, viscous; *leaves* linear, lanceolate, blunt; *calyx* wrinkled; *petal-claws* margined, membranaceous, fringed.

Lychnis sylvestris viscosa rubra angustifolia, *Raii Syn.* 340, 14; *Park.* 636.
Muscipula angustifolia, *Ger. em.* 601, 3.
Lychnis Viscaria, *Lin. S. P.* 625.
Red German catchfly.

Fissures of rocks; perennial; May and June.

Roots tufted; *stems* angular; *leaves* keeled, bald; *panicle* rather spiked; *flowers* crowded, rose-red, rarely white; *calyx* hairy, membranaceous; *capsule* ovate.

b. *Calyx-teeth short; petals cut; capsule* 1-*celled.*

2. *Lychnis alpina.* *Alpine lychnis.*

Herb bald; *flowers* densely corymbous; *calyx* smooth; *petals* notched; claws not margined, bald.

Lychnis alpina, *Lin. S. P.*

Mountains; perennial; July.

Stems in tufts, upright; *leaves* acute; *flowers* nearly sessile; *petals* rose-red, very slightly crowned.

3. *Lychnis plumaria.* *Feathery lychnis.*

Flowers loosely panicled; *petals* 4-cut, crowned; *capsule* roundish.

Lychnis plumaria sylvestris simplex, *Raii Syn.* 338, 4; *Park. Par.* 253.
Armerius pratenis mas et fœmina, *Ger. em.* 600, 1 and 2.
Lychnis Flos cuculi, *Lin. S. P.* 625.
Meadow pink. Wild Williams. Cuckow flower. Ragged Robin. Crow flowers. Marsh gilliflowers. Cuckow gilliflower.

Damp fields; perennial; July.

Root fibrous; *stem* upright, angular; *leaves* lanceolate; *panicle* leafy; *calyx* cylindrical, ribbed; *petals* flaccid, rose-red, white, often becomes doubled.

4. *Lychnis vespertina.* *Evening lychnis.*

Herb rather villous; *stem* kneed, upright; *leaves* lanceolate; *petals* reverse heartshape, crowned.

Lychnis sylvestris albo flore, *Raii Syn.* 339, 8; *Ger. em.* 468, 1 ‡; *Park.* 630.
Lychnis dioica β, *Lin. S. P.* 626.
Lychnis vespertina, *Sibthorp Fl. Ox.* 146.
Lychnis dioica, *De Candolle Fl. Gall.* 4366.
Wild white campion. White batchelors buttons when double.

Fields and hedges; perennial; May to September.

Root fusiform; *stem* firm, tall; *flowers* white, odoriferous at night, unisexual rarely hermaphrodite; *calyx* of the males elliptical, clubshape, 10-ribbed, veins 0; of the females ovate with intercostal veins; *capsule* conical, larger than that of L. diurna.

5. *Lychnis diurna.* *Day lychnis.*

Herb hirsute; *stem* kneed, weak; *leaves* ovate; *petals* reverse-heartshape, crowned.

Lychnis sylvestris rubello flore, *Raii Syn.* 339, 9; *Ger. em.* 469, 1.
Lychnis sylvestris, flore rubro, *Park.* 631.
Lychnis dioica α, *Lin. S. P.* 626.
Lychnis diurna, *Sibthorp Fl. Ox.* 146.
Lychnis sylvestris, *De Candolle Fl. Gall.* 4367.
Wild red campion. Red batchelors buttons when double.

Damp woods and hedges; perennial; May to September.
Root fusiform; *leaves* soft, pale; *flowers* rose-red, inodorous; mostly unisexual; *calyx* in both sexes 10-ribbed, without intermediate veins; *capsule* conical, smaller than that of L. vespertina.

c. Githago. *Petals not cut; calyx-teeth as long as the petals.*

6. *Lychnis segetum.* *Corn lychnis.*
Herb hirsute; *calyx-teeth* twice as long as the corolla.

Lychnis segetum major, *Raii Syn.* 338, 5.
Pseudo melanthium, *Ger. em.* 1087.
Lychnoides segetum sive Nigellastrum, *Park.* 632.
Agrostema Githago, *Lin. S. P.* 627.
Lychnis Githago, *De Candolle Fl. Gall.* 392.
Githago segetum, *Des Fontaines Atl.* 1, 363.
Cockle. Corn cockle. Wild nigella.

Stem branched, hairs upright, pressed to the stem; *leaves* linear, lanceolate; *flowers* terminal, purple; *calyx* 10-ribbed.

B. ALSINEÆ. *Calyx* 4 or 5-sepaled; *stamens* 3 to 10.

VI. 401. BUFFONIA. Linnæus. *Buffon.*
Calyx 4-sepaled; *petals* 4; *styles* 2; *capsule* compressed, 1-celled, 2-valved, 2-seeded.

Buffonia annua. *Annual Buffon.*
Stem weak, panicled; *flowers* terminal and lateral; *calyx* streaked.

Alsine polygonoides tenuifolia, flosculis ad longitudinem caulis velut in spicam dispositis nostra, *Raii Syn.* 346.
Buffonia tenuifolia, *Lin. S. P.* 179.
Buffonia annua, *Lamarck Illustr.* 349.

Sea-shore; annual; July. A doubtful native.
Stems many; *leaves* awlshape, pressed to the stem, connate at the base; *flowers* peduncled, white.

VII. 402. ELATINE. Dioscorides. *Water-wort.*
Calyx 3 or 4-sepaled; *petals* 3 or 4, sessile; *stamens* 6 or 8; *ovary* orbicular, depressed; *styles* 3 or 4; *capsule* 3 or 4-celled, 4-valved, many-seeded.

Elatine serpyllifolia. *Thyme-leaved waterwort.*
Stem rooting, much branchy; *leaves* opposite; *flowers* alternate.

Elatine Hydropiper, *Lin. S. P.* 327.

Edges of lakes on sand; annual; August.
Herb bald; *stem* 2 in. high; *flowers* axillary, peduncled, single; *seeds* bent, streaked.

VIII. 403. SAGINA. Linnæus. *Pearlwort.*

Calyx 4-sepaled; *petals* 4, very small; *stamens* 4; *styles* 4; *capsule* 1-celled, 4-valved, many-seeded.

1. *Sagina procumbens.* *Procumbent pearlwort.*

Stem trailing, bald; *leaves* linear, pointed; *petals* very short, not cut.

Alsinella muscoso flore repens, *Raii Syn.* 345, 2.
Caryophyllus minimus muscosus noster, *Park.* 1340.
Sagina procumbens, *Lin. S. P.* 185.
Seal wort. Chickweed breakstone.

Sand and old walls; perennial; May to August.

Stems many, rooting; *leaves* bald, connate; root-leaves in tufts; *peduncles* single, longer than the leaves; *flowers* yellowish; *calyx* spreading, blunt.

2. *Sagina maritima.* *Sea pearlwort.*

Stem rather upright, divaricating, bald; *leaves* blunt, not armed; *petals* very small.

Sagina maritima, *Engl. Bot.* 2195.

Alpine and marine rocks; annual; April and May.

Stem purplish; *leaves* membranacéous at bottom.

3. *Sagina apetala.* *Bloomless pearlwort.*

Stem nearly upright, downy; *leaves* awned, hairy; *petals* very minute.

Alsinella q. Saxifraga Anglica alsine folio annua Plot. *Raii Syn.* 345, 3.
Sagina apetala, *Lin. Mant.* 2, 519.
Annual pearlwort.

Sandy places and walls; annual; May and June.

Stems many, downy, not rooting; *peduncles* long, hairy; *petals* white, or 0; *seeds* girt with a black line.

IX. 404. SPERGULA. Dodonæus. *Spurry.*

Calyx 5-sepaled; *petals* 5, not nicked; *stamens* 5 or 10; *styles* 5; *capsule* 1-celled, 5-valved.

a. *Leaves opposite; stipules* 0.

1. *Spergula subulata.* *Awlshape spurry.*

Herb rather hairy, hairs glandular; *leaves* nearly facing one way, linear awlshape, fringed, slightly awned; *peduncles* very long, solitary; *petals* the length of the calyx.

Alsinella q. Saxifraga graminea pusilla foliis brevioribus, crassioribus et succulentioribus, *Raii Syn.* 345, 4.
Sagina procumbens β, *Lin. S. P.* 185.
Spergula subulata, *Withering Bot. Arr.* 436.
Spergula laricina, *Hudson Fl. Angl.* 203.
Spergula saginoides, *Curtis Fl. Lond.*

Sandy heaths; perennial; July and August.

Stem trailing at bottom, afterwards erect; *leaves* connate; *peduncles* hairy; *flowers* drooping, white; *sepales* ovate, blunt, viscid; *stamens* 5 or 10; *capsule* 5-valved; *seeds* with a black line round them.

2. *Spergula saginoides.* *Pearl-wort spurry.*

Herb bald; *leaves* linear, awlshape, smooth, pointed; *peduncles* solitary, very long, bald; *petals* shorter than the calyx.

Spergula saginoides, *Lin. S. P.* 631.
Sagina procumbens 2, *Withering Bot. Arr.* 278.

Alpine rocks; perennial; June.

Stem decumbent, upright at the tip; *peduncles* mostly terminal; *flowers* drooping; *sepales* ovate, blunt; *petals* roundish, blunt; *stamens* 10; *seeds* not edged.

3. *Spergula nodosa.* *Knotty spurry.*

Leaves awlshape, smooth, rather blunt; lower leaves widely sheathing; upper leaves bundled, axillary; *stem* mostly simple, few-flowered; *petals* twice as long as the calyx.

Spergula q. Alsine palustris foliis tenuissimis, sive Saxifraga palustris alsinefolia, *Ger. em.* 567, 6; *Raii Syn.* 350, 5.
Saxifraga palustris Anglica, *Park.* 427.
Alsine nodosa Germanica, *Park.* 764.
Spergula nodosa, *Lin. S. P.* 630

Moist sandy places; perennial; July to August.

Stem tufted, spreading, 9 in. high.

b. *Leaves in whirls, stipuled at bottom.*

4. *Spergula arvensis.* *Field spurry.*

Leaves in whirls; *fruit-bearing peduncle* bent back; *seed* kidneyshape, angular, not edged.

Spergula q. Alsine Spergula dicta major C. Bauhini, *Raii Syn.* 351, 7.
Saginæ Spergula, *Ger. em.* 1125.
Saginæ Spergula major, *Park.* 562.
Spergula arvensis, *Lin. S. P.* 630.

Sandy fields, also cultivated; annual; July and August.

Stem upright, spreading, panicled at top; *panicle* many-flowered; *peduncles* downy, 1-flowered; *sepales* ovate, blunt,

margined; *stamens* 5 or 4; *seeds* kidneyshape, tubercular, rough.—Herb nutritive to cattle, and causes them to give much milk; seeds used to feed poultry, and to make bread.

5. *Spergula pentandra.* *Five-stamened spurry.*

Leaves in whirls; *flowers* 5-stamened; *seeds* flat, margined.

Spergula annua semine foliaceo nigro, circulo membranaceo albo cincto, *Raii Syn.* 351, 8.
Spergula pentandra, *Lin. S. P.* 630.

Sandy fields; annual; June.

Leaves very fleshy; *calyx-margin* scarcely scarious; *seeds* smooth, margin white.

X. 405. CHERLERIA. Haller. *Cherler.*

Calyx 5-sepaled; *petals* 5, very small, nicked; *stamens* 10; *styles* 3; *capsule* 3-valved, 3-celled; cells 2-seeded.

Cherleria sedoides. *Sedumlike cherler.*

Stems tufted; *leaves* 3-sided, awlshape, 3-ribbed; *peduncle* single, axillary, 1-flowered.

Sedum montanum perpusillum luteolis floribus, *Park.* 737.
Cherleria sedoides, *Lin. S. P.* 608.
Mossy cyphel.

Alpine rocks; perennial; July.

Root woody, branched; *leaves* close, blunt; *peduncles* 2-bracteated in the middle; *flowers* yellowish green, upright; *sepales* keeled; *seeds* angular.

XI. 406. ARENARIA. Linnæus. *Sandwort.*

Calyx 5-sepaled; *petals* 5, not cut; *stamens* 10; *styles* 3; *capsule* 1-celled, 3-valved.

a. Stipularia. *Stipules at the base of the leaves, scarious.*

1. *Arenaria rubra.* *Red sandwort.*

Stem prostrate; *leaves* linear, mucronate, longer than the internode; *seeds* compressed, angular, roughish.

Spergula purpurea, *Raii Syn.* 351, 9.
Alsine spergulæ facie, *Ger. em.* 1125, 5.
Saginæ Spergula minima, *Park.* 561.
Arenaria rubra, *Lin. S. P.* 606.
Arenaria campestris, *Allioni Pedem.*
Chickweed spurrey. Small red spurrey.

Sandy fields; annual; July and August.

Stem divaricating, bald; *leaves* flat; *stipules* torn; *panicle* terminal, downy; *flowers* bluish flesh-colour; *capsule* three-valved, as long as the calyx; *seeds* wedgeshape.

2. *Arenaria marina.* *Marine sandwort.*

Stem prostrate; *leaves* semicylindrical, fleshy, not armed, as long as the internodes; *seeds* compressed, margined, smooth.

Spergula maritima flore parvo cæruleo, semine vario, *Dillen in Raii Syn.* 351, 11.
Arenaria rubra β, *Lin. S. P.* 606.
Arenaria marina, *Fl. Danica*, 740.
Arenaria marginata, *De Candolle Fl. Gall.* 4434.
Arenaria rubra media, *Hudson Fl. Angl.* 193.
Red samphire.

Sea-coasts; annual; June and July.

Stem very smooth; *leaves* fleshy, bald; *stipules* torn; *flowers* large, pale flesh-red or purple; *capsule* longer than the calyx; *seed* flat, slightly margined.—Succulent.

β. *media.* *Seeds* margined; margin membranaceous, streaked.

Spergula q. Alsine spergulæ facie media C. Bauhini, *Raii Syn.* 351, 10.
Arenaria media, *Lin. S. P.* 606.
Arenaria rubra γ, *Hudson Fl. Angl.* 193.

b. *Leaves awlshape; stipules* 0.

3. *Arenaria tenuifolia.* *Fine-leaved sandwort.*

Leaves awlshape, acute; *stem* much branched, forked, panicled; *sepales* longer than the petals, awlshape, streaked; *petals* lanceolate; *capsules* upright.

Spergula q. Alsine tenuifolia Joh. Bauhini, *Raii Syn.* 350, 3.
Arenaria tenuifolia, *Lin. S. P.* 607.

Sandy barren fields; annual; June.

Herb bald or hairy; *stem* upright; *leaves* bristlelike, 3-ribbed; lower leaves connate, dilated; *peduncles* upright; *flowers* small, white; *sepales* margined; *petals* blunt; *seeds* compressed.

4. *Arenaria verna.* *Spring sandwort.*

Stems many, tufted, long, panicled; *leaves* awlshape, rather blunt, ribbed; *sepales* 3-ribbed, ribs remote, equal; *petals* reverse ovate, longer than the sepales.

Spergula q. Alsine pusilla pulchro flore, folio tenuissimo nostras, *Raii Syn.* 350, 4.
Arenaria verna, *Lin. Mant.* 72.
Arenaria saxatilis, *Hudson Fl. Angl. ed.* 1, 168.

Mountains; perennial; May to August.

Stems much branched, downy; *leaves* wide at bottom, connate, mostly bald; *sepales* ovate, acute, shorter than the petals.

β. *laricifolia.* *Sepales* linear, pointed, shorter than the petals.

Arenaria laricifolia, *Withering Bot. Arr.* 521.

γ. *juniperina.* *Sepales* ovate, rather bald; nearly as long as the petals.

Arenaria juniperina, *Withering Bot. Arr.* 521.

5. *Arenaria fastigiata.* *Even-topped sandwort.*

Stem upright, stiff, corymbose; *leaves* awlshape; *calyx-side-ribs* dilated; *petals* very short.

Arenaria fastigata, *Engl. Bot.* 25, 1744.

Mountains; annual; June.

Flowers small; *seeds* elegantly toothed.

XII. 407. ALSINELLA. Dillenius. *Alsinelle.*

Calyx 5-sepaled, spreading; *petals* 5, not nicked; *stamens* 10; *styles* 3; *capsule* ovate, 1-celled; 6-toothed at the tip.—*Leaves* ovate; *stipules* 0.

1. *Alsinella serpyllifolia.* *Thyme-leaved alsinelle.*

Leaves nearly sessile, ovate, scabrous; *sepales* longer than the petals, hairy; outer sepales 5-ribbed, inner 3-ribbed.

Spergula q. Alsine minor multicaulis C. Bauhini, *Raii Syn.* 349, 1.
Alsine petræa, *Ger. em.* 612, 6.
Arenaria serpyllifolia, *Lin. S. P.* 606.

Dry sandy places and walls; annual; June and July.

Stems many, ascending, stiff, forked; *leaves* small, ribbed; *peduncles* upright; *flowers* white, small; *seeds* wrinkled.

2. *Alsinella trinervis.* *Three-ribbed alsinelle.*

Leaves ovate, acute, petioled, fringed, 3 or 5-ribbed; *stem* slender, branched; *sepales* slightly 3-ribbed; keel rough.

Spergula q. Alsine plantaginis folio Joh. Bauhini, *Raii Syn.* 349, 2.
Arenaria trinervis, *Lin. S. P.* 605.
Plantain-leaved chickweed.

Damp woods and hedges; annual; May and June.

Stem weak, ascending, hairy; *peduncles* from the forks of the stem, 1-flowered, bending down after flowering; *petals* reverse ovate, as long as the calyx; *seeds* smooth.

3. *Alsinella ciliata.* *Fringed alsinelle.*

Stem prostrate, branched; *leaves* slightly petioled, oblong, ovate, spathulate, fringed at the base: *flowers* terminal, solitary; *sepales* lanceolate, mostly 7-ribbed, smaller than the petals.

Arenatia ciliata, *Wulf in Jacquin. Coll.* 1, 245.

Mountains; perennial; July and August.

Leaves tubercular, rough; *peduncles* downy, hairs bent backwards; *flowers* large.

XIII. 408. HOLOSTEUM. Dioscorides. *Holosteum.*

Calyx 5-sepaled; *petals* variously cut; *stamens* 3 or 5; *styles* 3; *capsules* 1-celled, 6-toothed.

Holosteum umbellatum. *Umbelled holosteum.*

Leaves ovate, acute; *flowers* umbelled, terminal: *petals* toothed.

Caryophyllus Holostius arvensis, *Ger. em.* 595, 16.
Holosteum umbellatum, *Lin. S. P.* 130.
Cerastium umbellatum, *Hudson Fl. Angl.* 201.
Broad-leaved wild pink. Umbelliferous chickweed.

Old walls; annual; April.

Stem branchy at bottom, small, viscid at the top; *umbells* simple; *peduncles* bracteated, becoming divaricated; *flowers* white or reddish.

XIV. 409. STELLARIA. Brunsfel. *Chickweed.*

Calyx 5-sepaled; *petals* 2-cut; *stamens* 3 to 10; *styles* 3; *capsules* 1-celled, 5 or 6-toothed.

a. Alsinæ. *Petals deeply 2-parted; stamens 5 or 10; leaves ovate; capsule-mouth 5 or 6-toothed.*

1. *Stellaria media.* *Middle-size chickweed.*

Herb bald; *leaves* ovate, petioled; *stem* procumbent, with alternate lateral lines of hairs.

Alsine vulgaris seu Morsus gallinæ, *Raii Syn.* 347, 6.
Alsine media seu minor, *Ger. em.* 611, 2.
Alsine media, *Lin. S. P.* 389.
Stellaria media, *Withering Bot. Arr.* 418.
Chickweed.

Damp places and gardens; annual; April to September.

Plant very various in size; *stem* prostrate, brittle; *leaves* bald; *petioles* fringed; *peduncles* axillary and terminal, solitary, 1-flowered; *calyx* hairy; *petals* white, deeply 2-cut, shorter than the calyx; *capsule* 6-toothed.—Young shoots boiled make an excellent spinage-herb; plant used as greens for small birds.

2. *Stellaria aquatica.* *Water chickweed.*

Plant hairy; *leaves* heartshape; upper leaves sessile; *peduncles* lateral, solitary, when fruitbearing turned back; *capsule* ovate, 5-toothed; *styles* 5.

Alsine major repens perennis, *Raii Syn.* 347, 4.
Alsine major, *Ger. em.* 611; *Park.* 759, 2.
Cerastium aquaticum, *Lin. S. P.* 529.

Watery places; perennial; July.

Root creeping; *stem* weak, branched; *petals* white, deeply 2-parted, as long as the sepales; *styles* 5.

3. *Stellaria nemorum.* *Wood chickweed.*

Herb rather hairy; *stem* hollow; *lower leaves* heartshape, petioled; upper ovate, sessile; *panicle* forked; *peduncles* becoming reflected; *styles* 3; *capsule* ovate, 6-toothed.

Alsine montana folio smilacis instar, flore laciniato, *Dillen in Raii Syn.* 347, 5.
Stellaria nemorum, *Lin. S. P.* 603.

Damp woods; perennial; May and June.

Root creeping; *stem* weak; *leaves* pale green; *panicle* many-flowered, leafy; *calyx* hairy at the base; sepales scarious, margined.

b. Stellariæ veræ. *Petals reverse heartshape; stamens* 10; *stem* 4-*sided; leaves linear, lanceolate, stiff; capsule six-toothed, teeth deeply cut; styles* 3.

4. *Stellaria glauca.* *Sea-green chickweed.*

Stem rather upright, weak; *leaves* linear, lanceolate, glaucous, edge smooth; floral leaves scarious; *peduncles* upright; *sepales* 3-ribbed; *petals* twice as long as the calyx.

Alsine q. Caryophyllus holosteus arvensis medius, *Raii Syn.* 347, 3.
Stellaria glauca, *Withering Bot. Arr.* 420.
Stellaria media, *Sibthorp Fl. Ox.* 141.
Stellaria palustris, *Retz. Fl. Scand.* 2, 548.
Stellaria graminea β, *Hudson Fl. Angl.* 190.

Damp fields and hedges; perennial; June and July.

Stem smooth; *peduncles* axillary and terminal.

5. *Stellaria graminea.* *Grassy chickweed.*

Stem rather upright, weak; *leaves* linear, lanceolate, edge smooth; *panicles* divaricating, terminal; *sepales* 3-ribbed; *petals* as long as the calyx.

Alsine q. Caryophyllus holosteus arvensis glaber, flore minore C. Bauhini, *Raii Syn.* 346, 2.
Stellaria graminea, *Lin. S. P.* 604.
Lesser stitchwort.

Sandy pastures; perennial; May.

Stem, *leaves*, and *peduncles* smooth; *sepales* membranaceous, white; ribs green.

6. *Stellaria holostea.* *All-bone chickweed.*

Stem upright, stiff; *leaves* lanceolate; edge rough, finely serrated; *sepales* ribless; *petals* 3 times as long as the calyx.

Alsine q. Caryophyllus holosteus arvensis glaber, flore majore C. Bauhini, *Raii Syn.* 346, 1.

Gramen leucanthemum, *Ger. em.* 47; *Park.* 1325.

Stellaria holostea, *Lin. S. P.* 603.

Stitchwort. Great stitchwort.

Dry woods and coppices; perennial; May.

Root creeping; *stem* diffuse, rough; *leaves* acute; *panicle* forked, leafy; *peduncles* upright; *capsule* globular.

7. *Stellaria scapigera.* *Stalkbearing chickweed.*

Stems in tufts; *leaves* linear, lanceolate, crowded; edge rough; *peduncles* longer than the stem; *sepales* 3-ribbed; *petals* as long as the calyx.

Stellaria scapigera, *Willdenow S. P.* 2, 716.

Rivulets; perennial; May and June.

Stem very short, stiff; *leaves* acute, ribbed; *peduncles* many, 4-sided, simple.

c. Cerastium. *Petals 4 or 5, 2-cut; stamens 4 to 10; capsule-mouth 10-toothed; leaves nearly ovate, hairy.*

8. *Stellaria cerastoides.* *Mouse-ear chickweed.*

Stem hairy, tufted, spreading; *leaves* elliptical, oblong, blunt; *peduncles* in pairs or threes, 1-flowered; *calyx* downy; *sepales* 1-ribbed; *petals* twice as long as the calyx.

Stellaria cerastoides, *Lin. S. P.* 604.

Alpine places; perennial; July.

Root creeping; *stem* branched at bottom, with a single line of hairs.; *leaves* bald, bent back; *peduncles* downy, upright; *sepales* blunt, half the length of the petals; *styles* 3, 4, or 5; *capsules* oblong, 6, 8, or 10-toothed.

9. *Stellaria vulgata.* *Common chickweed.*

Plant hairy, viscid; *stems* in tufts; *leaves* ovate; *flowers* in bundles; *peduncles* very short; *petals* as long as the calyx; *capsules* oblong.

Myosotis q. Alsine hirsuta myosotis latifolia præcocior, *Raii Syn.* 348, 3.

Cerastium vulgatum, *Lin. S. P.* 627.

Cerastium viscosum, *Hudson Fl. Angl.* 200.

Fields and walls; annual; April and May.

Herb light green; *stem* ascending, forked; *leaves* broad, blunt; *peduncles* upright; *sepales* acute; *capsule* cylindrical, curved, twice as long as the calyx.

10. *Stellaria viscosa.* *Viscous chickweed.*

Herb hairy, viscous, diffused; *leaves* lanceolate, oblong; *flowers* panicled, shorter than the peduncles; *petals* the same length as the calyx; *capsule* oblong.

Myosotis q. Alsine hirsuta myosotis Lobelii, *Raii Syn.* 349, 4.
Cerastium viscosum, *Lin. S. P.* 627.
Cerastium vulgatum, *Hudson Fl. Angl.* 200.

Fields and walls; perennial; May to September.

Herb dark green; *stems* ascending; *leaves* rather blunt; *peduncles* viscid, twice as long as the flower; *sepales* all margined; *capsules* cylindrical, curved, twice as long as the calyx.

11. *Stellaria semidecandrum. Half-ten-stamened chickweed.*

Stems tufted, hairy, viscid above; *leaves* upright, ovate, oblong; *flowers* conglomerated, 5-stamened; *petals* notched, shorter than the calyx; *capsules* cylindrical.

Myosotis q. Cerastium hirsutum minus, parvo flore Dillenii, *Dillen in Raii Syn.* 348, 2.
Cerastium semidecandrum, *Lin. S. P.* 627.

Sandy places and walls; annual; March and April.

Stem upright; *lower leaves* rather bald; *peduncles* longer than the calyx; *sepales* margined; *stamens* 5, rarely 10; *capsules* twice as long as the calyx.

12. *Stellaria pumila.* *Dwarf chickweed.*

Stems in tufts, hairy, viscid at top; *leaves* upright, ovate, oblong; *flowers* conglomerate, 5-stamened; *petals* as long as the calyx; *capsules* twice as long, cylindrical.

Cerastium pumilum, *Curtis Fl. Lond.*
Cerastium semidecandrum β, *Smith Fl. Brit.* 497.

Dry pastures; annual; February and March.

Flowers more conspicuous; *petals* larger and deeper cleft; *capsule* longer than in S. semidecandrum.

13. *Stellaria tetrandrum.* *Four-stamened chickweed.*

Stems diffused, hairy, rather viscid; *leaves* elliptical or ovate; *peduncles* 3 times as long as the calyx; *flowers* conglomerate, 4 or 5-stamened; petals 2-cut, shorter than the calyx; *capsule* cylindrical, rather longer than the calyx.

Cerastium tetandrum, *Curtis Fl. Lond.*
Sagina cerastoides, *Smith in Tr. Lin. Soc.* 2, 343.

Sandy sea-shores and walls; annual; May and June.

Herb light green; *stem* slightly panicled, forked; *calyx* 4-sepaled; 2 inner sepales narrower, margined; *petals* 4, reverse heartshape; *stamens* 4: in cultivated plants, calyx often 5-sepaled; petals and stamens 5.

14. *Stellaria latifolia.* *Broad-leaved chickweed.*

Stems tufted, rough; *leaves* elliptical; *peduncles* terminal, simple, mostly solitary; *petals* longer than the calyx; *capsules* ovate, turgid.

Myosotis q. Alsine myosotis languinosa alpina grandiflora, *Raii Syn.* 349, 6.
Cerastium latifolium, *Lin. S. P.* 629.
Cerastium tomentosum, *Hudson Fl. Angl. ed.* 1, 176.

Alpine hills; perennial; June.

Stem ascending, densely leaved; *leaves* elliptical, hairy; hairs short, stiff, jointed; *peduncles* downy, terminal, solitary, nearly as long as the stem: *bracteæ* 0; *sepales* margined; *petals* half as long again as the calyx.

15. *Stellaria alpina.* *Alpine chickweed.*

Leaves elliptical, naked or hairy; *panicle* forked, few-flowered, bracteated; *capsule* oblong, bent.

Myositis q. Alsine myosotis facie, lychnis alpina flore amplo niveo, repens D. Lhwyd, *Raii Syn.* 349, 5.
Cerastium alpinum, *Lin. S. P.* 628.
Cerastium latifolium, *Lightfoot Fl. Scot.* 242.

Rills among alpine rocks; perennial; June and July.

Root creeping; *stem* upright, simple; *leaves* bald, or with soft hairs; *peduncles* 3 or 4 together, 1-flowered; *bracteæ* opposite, lanceolate; *petals* reverse-heartshape; *capsules* cylindrical, awned, longer than the calyx.

16. *Stellaria arvensis.* *Field chickweed.*

Stems in tufts; *leaves* linear, lanceolate, downy, blunt, fringed at bottom; *petals* twice as long as the calyx; *capsule* oblong, straight.

Myosotis q. Caryophyllus arvensis hirsutus flore majore, C. Bauhini, *Raii Syn.* 348, 1.
Caryophyllius Holostius, *Ger. em.* 595, 15.
Cerastium arvense, *Lin. S. P.* 628.

Chalky and gravelly fields; perennial; May to August.

Root creeping; *stem* downy; *panicle* forked, few-flowered; *sepales* ovate, blunt, margined; *petals* large, white, reverse-heartshape.

XV. 410. MŒNCHIA. Ehrhart. *Mœnch.*

Calyx 4-sepaled; sepales connivent, lanceolate, acute, margined; *petals* shorter than the calyx, not cut, pointed; *stamens* 4; *stigmata* 4, sessile, villous; *capsule* 1-celled, opening in 8 teeth at the tip; *seeds* kidneyshape, rough.

Mœnchia glauca. *Glaucous mœnch.*

Herb glaucous; *leaves* lanceolate, acute; *peduncles* solitary, long, 1-flowered.

Alsinella foliis caryophylleis, *Raii Syn.* 344, 1.
Sagina erecta, *Lin. S. P.* 185.
Mœnchia quaternella, *Ehrhart Beitr.* 2, 177.
Alsinella erecta, *Mœnch Method.* 222.
Mœnchia glauca, *Persoon Syn.* 153.
Least stitchwort. Upright pearlwort.

Gravelly pastures; annual; September and October.

Root small; *stems* few, upright, stiff, or many, trailing; *peduncles* 1 or 2, very long; *petals* white, not so long as the calyx; *capsules* cylindrical.

Fam. VIII. 73. CISTINEÆ. De Candolle. *Cisti*, Jussieu. *Cisteæ*, Lamarck.

Calyx 5-sepaled, persisting; *petals* 5, hypogynous, equal, caducous, expanded; *stamens* many, indefinite, hypogynous; *ovary* 1, free; *style* 1; *capsule* many-seeded, 1 to 10-celled, 3 or many-valved; *seeds* affixed to the middle of the valves, or bottom of the cells; perisperm fleshy; corculum bent or spiral.—*Stem* shrubby or undershrubby; *leaves* mostly opposite, stipuled.

410. HELIANTHEMUM. Val. Cordus. *Dwarf-cistus.*

Calyx unequal, 2 outer sepales smallest; *capsule* 1-celled, 3-valved; *seeds* adnate to the middle of the valves; corculum bent.—*Flowers* mostly yellow.

a. *Flowers yellow; leaves not stipuled at the base.*

1. *Helianth. marifolium.* *Marum-leaved dwarf-cistus.*

Stem rather shrubby, procumbent; *leaves* opposite, ovate or oblong, flat; beneath white, tomentose; *flowers* racemose.

Helianthemum alpinum folio pilosellæ minoris Fuchsii, *Raii Syn.* 342, 3.
Cistus marifolius, *Lin. S. P.* 741.
Cistus hirsutus, *Hudson Fl. Angl.* 232.
Cistus Anglicus, *Lin. Mant.* 245.
Cistus canus, *Jacquin Austr.* 277.

Alpine rocks; shrubby; May and June.

Leaves petioled, green above; *flowers* small; *calyx* villous; *petals* 4 or 5, not cut; *ovary* bald; *style* kneed.

2. Helianthemum guttatum. *Spotted dwarf-cistus.*

Stem herbaceous, upright; *leaves* opposite, oblong, three-ribbed, hairy; radical leaves ovate; *racemes* without bracteæ.

Cistus flore pallido, punicante macula insignito, *Raii Syn.* 342, 1.
Cistus annuus flore maculato, *Ger. em.* 1281, 19.
Cistus annuus flore guttato, *Park.* 661.
Cistus guttatus, *Lin. S. P.* 741.

Sandy pastures; annual; June and July.

Stem 9 inches high, 4-sided; *racemes* terminal, 1-rowed; *calyx* glandular; *petals* with a reddish spot at the base; *stigma* sessile.

b. *Flowers yellow; leaves stipuled at the base.*

3. Helianthemum ledifolium. *Ledum-leaved dwarf-cistus.*

Stem herbaceous, upright, rather bald; *flowers* lateral, alternate; *peduncles* upright, shorter than the calyx.

Cistus annus, *Ger. em.* 1280, 17.
Cistus annuus longifolius Lobelii, *Ger. em.* 1280, 18.
Cistus ledifolius, *Lin. S. P.* 742.
Cistus salicifolius, *Hudson Fl. Angl.* 233.

Sandy pastures; annual; June and July.

Stem upright, sometimes branched at the bottom, few-flowered; *leaves* downy on both sides; *stipules* one-third of the length of the leaves; *flowers* solitary; *petals* shorter than the calyx, falling off extremely soon.

4. Helianthemum Surreianum. *Surrey dwarf-cistus.*

Stem rather shrubby, trailing; *leaves* ovate, oblong; beneath hairy, spotted; *stipules* and *petals* lanceolate.

Helianthemum vulgare, petalis florum perangustis, *Dillen in Raii Syn.* 341, 2.
Cistus Surrejanus, *Lin. S. P.* 743.
Cistus Helianthemum δ, *Hudson Fl. Angl.* 283.

Chalky hills; shrubby; July and August.

Stem simple, hairy; hairs bent back; *leaves* petiolated, green on both sides, hairy and dotted underneath; *stipules* fringed; *racemes* many-flowered, solitary; *petals* slender, pointed.

5. Helianthemum vulgare. *Common dwarf-cistus.*

Stem rather shrubby, trailing; *leaves* elliptical, oblong, woolly beneath; *stipules* lanceolate; *calyx* nearly bald; *petals* roundish.

Helianthemum vulgare, *Raii Syn.* 341, 1; *Park.* 656; *De Candolle Fl. Gall.* 4495.
Helianthemum Anglicum luteum, *Ger. em.* 1282, 1.
Cistus Helianthemum, *Lin. S. P.* 744.
Common dwarf cistus. Little sun-flower.

Sandy and chalky pastures; shrubby; July and August.

Stem mostly simple; *leaves* slightly rolled back, above hairy, beneath clothlike, white; *stipules* fringed; *stamens* as long as the style, upright, bending down as soon as touched; *flowers* gold yellow.

6. *Helianthemum tomentosum.* *Clothlike dwarf-cistus.*

Stem shrubby, trailing; *leaves* elliptical, oblong; beneath snowy, clothlike, hairs stellate; *stipules* acute.

Cistus tomentosus, *Scopoli Fl. Carn.* 1, 276.

Mountains; undershrubby; July.

Leaves of the young shoots roundish; *hairs* of the upper surface of the leaves simple, of the under stellate; *flowers* large, gold yellow.

c. *Flowers white; leaves stipuled at the base.*

7. *Helianthemum polifolium.* *Poly-leaved dwarf-cistus.*

Stem rather shrubby, trailing; *leaves* oblong, revolute, beneath woolly; hairs on both surfaces stellate.

Helianthemum q. Chamæcistus montanus polii folio D. Plukenet, *Raii Syn.* 342, 4.
Cistus polifolius, *Lin. S. P.* 741.
Helianthemum polifolium, *De Candolle Fl. Gall.* 4490.

Rocks by the sea; undershrubby; June and July.

Hairs of the stem adpressed; *leaves* green above, white beneath; *petals* white, often crenulated.

Fam. IX. 74. FRANKENIACEÆ. Saint Hilaire.

Calyx persisting, 5-parted or toothed; *petals* 5, hypogynous, clawed, alternating with the calyx-lobes; *stamens* 5 or 6; *ovary* simple; *style* 1; *stigmata* 2 or 3; *capsule* one-celled, 2 or 3-valved; *placentarium* parietal; *corculum* straight, axile; perisperm fleshy; radicle below, or near the hilum.

412. FRANKENIA. Linnæus. *Sea-heath.*

Calyx nearly cylindrical, 5-toothed; *petal-claw* channelled, crenulated with a scale.

1. *Frankenia lævis.* *Smooth sea-heath.*

Flowers solitary; *petals* rather repand, blunt; *leaves* linear, fringed at the bottom.

Lychnis supina maritima ericæ facie, *Raii Syn.* 338, 3.
Polygonum serpyllifolium, *Ger. em.* 566, 3.
Erica supina maritima Anglica, *Park* 1484.

Bogs on the sea-coast; perennial; July.

Stem forked, trailing; *leaves* in bundles, revolute; *flowers* from the forks of the stem, sessile; *petals* flesh-colour.

2. *Frankenia pulverulenta.* *Powdery sea-heath.*

Flowers solitary; *petals* rather repand; *leaves* reverse ovate, retuse, flat, powdery beneath.

Spergula q. Alsine maritima supina, foliis chamæcises Tournefort, *Dillen in Raii Syn.* 352, 13.
Frankenia pulverulenta, *Lin. S. P.* 474.

Sea-coasts; annual; July.

Stem trailing, round, pubescent; *calyx* prismatic.

Fam. X. 75. DROSERACEÆ. De Candolle. *Cappari-dearum pars*, Jussieu.

Calyx 5-cut; *petals* 5, withering quickly; *stamens* 5; *styles* 5; *ovary* simple, girt with the persistent calyx and corolla; *capsule* 1-celled, 3 or 5-valved; *placentarium* on the middle of the valves; *seeds* many; perisperm fleshy; corculum very small, straight at the base; radicle below; cotyledons very short.—*Stem* herbaceous; *leaves* radical, alternate, concave, covered with glandular fringes; *flowers* on scapes, spiked; spikes when young involute.

413. DROSERA. V. Cordus. *Sun-dew.*

Calyx 5-cut; *petals* 5; *stamens* 5; *styles* 5; *capsule* 3 or 5-valved.

1. *Drosera rotundifolia.* *Round-leaved sun-dew.*

Leaves radical, orbicular; petioles hairy; *scape* racemous.

Ros Solis folio rotundo, *Raii Syn.* 356, 1; *Ger. em.* 1556, 1.
Ros Solis minor, *Park.* 1052.
Drosera rotundifolia, *Lin. S. P.* 402.
Youth-wort. Red rot. Moor grass. Ros Solis.

Turf bogs; perennial; July and August.

Leaves very obtuse, concave, covered above with reddish hairs; *scapes* many; *flowers* upright; *sepales* blunt; *petals* reverse ovate, white; *stamens* short; *styles* 6; *stigmata*

awlshape; *capsule* 3-valved.—Plant acrid, caustic, supposed to occasion the rot in sheep, and curdles milk, juice removes warts and corns; infusion in milk takes away freckles and sunburn; distilled with wine produces a very stimulating spirit, or may be made into a tincture, spiced and sweetened; formerly much used. Leaf-hairs support globules of liquor even in the hottest weather, are very irritable, and close upon small insects that touch them, after which the leaf itself bends and holds the dead insect imprisoned.

β. *caulescens.* *Plant* with a stem.

γ. *perennis.* *Root* perennial.

Ros solis, q. Rorella rotundifolia perennis Willisel, *Raii Syn.* 356, 3.

2. *Drosera longifolia.* *Long-leaved sun-dew.*

Leaves radical, reverse-ovate; *petioles* bald; *scape* racemous.

Ros Solis folio oblongo, *Raii Syn.* 356, 2; *Ger. em.* 1556, 2.
Ros Solis sylvestris longifolius, *Park.* 1052.
Drosera longifolia, *Lin. S. P.* 403.
Long-leaved rosa Solis.

Bogs; perennial; July and August.

Leaves oblong, blunt; *scapes* many; *styles* 6 or 9; *capsule* 3-valved.

β. *caulescens.* *Plant* with a stem.

γ. *perennis.* *Root* perennial.

Ros Solis q. Rorella longifolia perennis Willisel, *Raii Syn.* 356, 4.

3. *Drosera Anglica.* *English sun-dew.*

Leaves radical, oblong, blunt; *petioles* bald; *scapes* racemous; *styles* 8; *capsule* 4-valved.

Ros Solis q. Rorella longifolia maxima Willisel, *Raii Syn.* 356, 5.
Drosera Anglica, *Hudson Fl. Angl.* 135.

Bogs; perennial; July and August.

Leaves linear, reverse-ovate; *scapes* 12 in. high; *styles* 8; *stigmata* clubshape; *capsule* 4-valved.

Fam. XI. 76. RESEDACEÆ. De Candolle. *Capparidearum pars,* Jussieu.

Calyx 4 or 6-cut, persistent; *petals* 4 or 6, hypogynous, irregular, lobed; *stamens* 10 to 20; *ovary* nearly sessile, simple; *styles* 3 to 5, short; *stigmata* 3 to 5; *capsule* one-celled, angular, gaping at top, many-seeded; *seeds* parietal;

perisperm very thin or 0; corculum roundish, bent; cotyledons thick; radicle above.—*Stem* herbaceous; *leaves* not cut or pinnatifid; *flowers* racemose, yellow or white, bracteated.

414. RESEDA. Pliny. *Dyers-weed.*

Calyx 4 or 6-cut; *petals* 4 or 6, lobed; upper petal with a nectary at the bottom; *stamens* 10 to 20, declinate.

1. *Reseda salicifolia.* *Willow-leaved dyers-weed.*

Leaves lanceolate, waved, not cut; *calyx* 4-cut; *stem* upright.

Reseda q. Luteola, *Raii Syn.* 366, 2.
Luteola, *Ger. em.* 494.
Luteola vulgaris, *Park.* 602.
Reseda Luteola, *Lin. S. P.* 643.
Yellow weed. Wild weld. Dyers weed.

Waysides and walls, also cultivated on poor soils; annual; June and July.

Root fusiform; *stem* stiff, branched; *leaves* bald; *spike* many-flowered, bracteated; *middle petal* 4-cut; side petals entire or 3-cut; nectary crenated.—Plant affords a yellow dye much used; also used to make the yellow paint, called Dutch pink: on rich soils the stem becomes hollow, and contains less colouring matter.

β. *polygalæfolia.* *Flowers* small; *capsules* slender, three-toothed.

Reseda q. Luteola minima polygalæ folio Du Bois, *Dillen in Raii Syn.* 367, 2.*

2. *Reseda lutea.* *Yellow dyers' weed.*

Lower leaves pinnatifid, waved; upper 3-cut; *calyx* six-parted; *capsules* oblong, triangular, truncated at the tip.

Reseda vulgaris, *Raii Syn.* 366, 1.
Reseda Plinii, *Ger. em.* 277, 1.
Reseda minor, seu vulgaris, *Park.* 825.
Reseda lutea, *Lin. S. P.* 645.
Base rocket. Italian rocket. Wild mignonette.

Chalky fields and hills; annual; July and August.

Root woody; *stems* branched; *leaf-lobes* channelled, bald; *spike* upright; *petals* 6, variously lobed; nectary jagged; *capsules* wrinkled.

β. *crispa.* *Leaves* curled.

Reseda crispa Gallica, *Raii Syn.* 366, 2.*

Fam. XII. 77. POLYGALEÆ. Jussieu.

Calyx 5-sepaled; æstivation imbricate; side-lobes often largest, petaloid; *petals* 3 or 5, joined by the androphore, rarely distinct; *stamens* 8, hypogynous; *filaments* connate below into a tubular androphore; *anthers* 1-celled, inserted at the base, opening by a pore at top; *ovary* simple, two-celled; ovule solitary, pendulous; *style* 1; *stigma* often 2-lipped; *pericarp* mostly capsular, 2-celled, 2-valved; valves septiferous in the middle; *seed* pendulous; hilum strophiolate or comose; corculum axile; perisperm fleshy. —*Stem* herbaceous or shrubby, mostly bald; *leaves* simple, not cut, alternate; *stipules* 0; *flowers* spiked, terminal.

415. POLYGALA. Dioscorides. *Milk-wort.*

Calyx 5-parted, coloured; 2 side-lobes largest, wing-shaped; *corolla-lower-lip* bearded beneath.

1. *Polygala vulgaris.* *Common milk-wort.*

Leaves linear, lanceolate, acute; *calyx-wings* ovate, 3-ribbed, as long as the corolla.

Polygala, *Raii Syn.* 287, * 1; *Ger. em.* 564, 3, 4, and 5.
Polygala minor, *Park.* 1332.
Polygala vulgaris, *Lin. S. P.* 986.
Procession flower. Rogation flower. Hedge hyssop, Herb women.

Fields and pastures; perennial; June and July.

Roots woody; *stem* simple, trailing; *leaves* bald; *flowers* purple, red or white.

2. *Polygala amara.* *Bitter milk-wort.*

Leaves blunt; upper leaves linear, lanceolate; radical reverse ovate; *calyx-wings* ovate, 3-ribbed, blunt, longer than the corolla.

Polygala amara, *Willd. S. P.*

Pastures and heaths; perennial; June and July.

Root woody; *stem* upright; *flowers* purple, flesh-colour, or white.

Fam. XIII. 78. VIOLACEÆ. De Candol. *Violæ*, Jussieu.

Calyx 5-parted; *petals* 5, hypogynous, unequal, one generally spurred; *stamens* 5, hypogynous; *anthers* often coalescent; *ovary* 1, free; *style* 1; *capsule* 1-celled, 3-valved, many-seeded; valves septiferous in the middle; *perisperm* thin, fleshy; corculum straight.—*Stem* herbaceous; *leaves* alternate, stipuled; *flowers* solitary, blue or yellow; autumnal flowers often apetalous.

416. VIOLA. Pliny. *Violet.*

Calyx 5-parted, lower lobe produced at bottom; *petals* 5; upper largest, spurred at the base; *anthers* slightly joined together, membranaceous at the tip.

a. Viola. *Stigma acute, bent back at the tip.*

1. *Viola hirta.* *Hairy violet.*

Stem 0; *leaves* heartshape, petioled; *petioles* hairy; *calyx-lobes* blunt; *capsule* hairy.

Viola Martia major hirsuta inodora, *Raii Syn.* 365, 8.
Viola hirta, *Lin. S. P.* 1324.
Mountain pansies.

Woods and hedges on chalk; perennial; March, April.

Shoots short, horizontal, tufted; *leaves* nearly upright, serrated, hairy on both sides; *petioles* long, hairy; hairs short, bent down; *stipules* lanceolate; *scape* and *calyx* bald; *bracteæ* awlshape; *flowers* blue, scentless.

2. *Viola odorata.* *Sweet violet.*

Stem 0; *shoots* creeping; *leaves* heartshape, bald; *petioles* bald; *calyx-lobes* blunt.

Viola Martia purpurea, *Raii Syn.* 364, 1.
Viola nigra sive purpurea, *Ger. em.* 850, 1.
Viola simplex Martia, *Park. Par.* 282.
Viola odorata, *Lin. S. P.* 1324.

Shady places; perennial; March and April.

Root woody; *shoots* long, rooting, leafy; *leaves* bald above, very slightly downy beneath; *petioles* and *scape* rather bald; *flowers* purple, fragrant.—Root ʒij. to ʒiv. emetic and purgative; flowers laxative in syrup, which, when well made, is of a fine blue colour, and used as a test for acids and alkalies; seeds also laxative.

β. *alba.* *Flowers* white or reddish; side petals beardless.

Viola Martia alba, *Raii Syn.* 364, 2.
Viola flore alba, *Ger. em.* 850, 2.
Viola simplex Martia flore albo, *Park. Par.* 282.

3. *Viola palustris.* *Marsh violet.*

Stem 0; *leaves* kidneyshape, bald on both faces, ribbed beneath; *calyx* blunt; *spur* very short; *root* creeping.

Viola palustris rotundifolia glabra, *Raii Syn.* 364, 6.
Viola palustris, *Lin. S. P.* 1324.

Moist meadows and bogs; perennial; April and May.

Leaves crenate; *petioles* quite bald, roundish; *scape* four-sided, bald; *flowers* pale blue, veined, inodorous; *stigma* pitchershape.

β. *rubra.* *Flowers* red, streaked.

Viola rubra striata Eboracensis, *Raii Syn.* 365, 7; *Park.* 755.

4. *Viola canina.* *Dog violet.*

Stem at full growth ascending, nearly 3-sided; *leaves* oblong, heartshape, acute; *stipules* long, toothed, fringed; *calyx* acute.

Viola Martia inodora sylvestris, *Raii Syn.* 364, 3.
Viola canina flore albo, *Dillen in Raii Syn.* 364, 3.
Viola canina sylvestris, *Ger. em.* 851, 6.
Viola sylvestris, *Park.* 755.
Viola canina, *Lin. S. P.* 1344.

Woods and hedges; perennial; April to June.

Root woody; *stem* when young 0, afterwards long; *leaves* nearly bald; *petioles* slightly winged above, bald; *stipulæ* fringed; *peduncles* 4-sided, upright; *flowers* blue or white, streaked, inodorous; *stigma* globular.

β. *pumila.* *Plant* small; *spur* yellowish.

Viola canina vulgari omnibus partibus multo minorem; floris calcari luteolo, *Dillen in Raii Syn.* 364, 5.

γ. *alpina.* *Leaves* round.

Viola Martia alpina folio tenello circinato, *Raii Syn.* 366, 12.

δ. *lactea.* *Stem* round; *leaves* ovate, lanceolate, running at the base into the petiole; *stipulæ* glandular.

Viola lactea, *Engl. Bot.* 445.
Cream-coloured violet.

b. Jacea. *Stigma upright, funnel-shape.*

5. *Viola tricolor.* *Threecoloured violet.*

Herb bald; *stem* angular, branched, diffuse; *stipules* pinnatifid; *petals* twice as long as the calyx.

Viola tricolor, *Raii Syn.* 365, 9; *Ger. em.* 854, 1; *Lin. S. P.* 1326.
Viola tricolor major et vulgaris, *Park.* 756.
Hearts-ease. *Pansie*, i. e. Panacea. *Love in idleness.* *Cull me to you.* *Kiss me ere I rise.* All from a fancied resemblance in the throat of the flower. *Herb trinity.* *Three faces under one hood*, from the colours.

Fields; annual; May to September.

Stem leafed, downy; branches upright, *leaves* alternate, petioled, rarely slightly downy on the edges; *flowers* axillary, single, inodorous; *peduncles* very long; *petals* purple and yellow, reverse heartshape.

6. *Viola arvensis.* *Corn violet.*

Plant bald; *stem* angular, branchy, diffused; *petals* scarcely as long as the calyx; *stipules* pinnatifid at the bottom.

Viola bicolor arvensis, *Raii Syn.* 366, 11.
Viola tricolor petræa, *Ger. em.* 854, 4.
Viola arvensis, *Sibthorp Fl. Ox.* 84.

Corn-fields; annual; May and August.

Stem slightly pubescent; *lower leaves* round, heartshape; upper leaves ovate, oblong, crenated; *peduncles* long; *flowers* white and yellow.

7. *Viola lutea.* *Yellow violet.*

Stem 3-sided, simple, upright; *leaves* ovate, oblong, crenated, fringed; *stipules* palmately cut, fringed.

Viola montana lutea grandiflora nostras, *Raii Syn.* 365, 10.
Viola lutea, *Withering Bot. Arr.* 263.
Viola grandiflora, *Hudson Fl. Angl. ed.* 2, 380.
Great yellow pansey.

Mountainous pastures; perennial; May to September.

Stem weak at bottom; *stipule-lobes* divaricating, outer lobes smallest; *petals* longer than the calyx, yellow, streaked with black at the bottom, sometimes blue.

Fam. XIV. 79. PARNASSIÆ. *Capparidibus affines*, Juss.

Calyx 5-parted, persisting; *petals* 5, hypogynous, regular, alternating with the sepales; nectariferous scales 1 or 2, fringed, glandular, at the base of each petal; *stamens* 5, hypogynous, alternating with the petals; *anthers* 2-celled: *ovary* 1, sessile, free; *styles* 0; *stigmata* 2 or 4, persisting; *capsule* 4-valved, 1-celled, or apparently 4-celled; partitions on the middle of the valves; *seeds* ascending, margined; perisperm 0; corculum straight; cotyledon small; radicle below.—*Stem* herbaceous; *leaves* radical, heartshape, ribless, bald, not in the least cut; *scape* 4-flowered at the tip; *bractea* 1, leaflike in the middle of the scape.

417. PARNASSIA. Tournefort. *Grass-of-Parnassus.*

Calyx 5-parted; *petals* 5 or 6; scale 1, at the base of each of the petals; *stamens* 5; *capsule* 4-sided, 1-celled.

Parnassia palustris. *Marsh grass-of-Parnassus.*

Root-leaves heartshape; *nectariferous scales* many-bristled.

Parnassia vulgaris et palustris, *Raii Syn.* 355.
Gramen Parnassi minus, *Ger. em.* 840.
Gramen Parnassi vulgare, *Park.* 429.
Parnassia vulgaris, *Lin. S. P.* 391.

Spongy bogs; perennial; September and October.

Root fibrous; *petals* heartshape, with pellucid veins; scales short; *stamens* at first incumbent upon the pistill, then upright; *anthers* heartshape, yellow.

Fam. XV. 80. CRUCIFERÆ.

Calyx 4-sepaled, mostly deciduous; *petals* 4, placed crosswise, on the hypogynous disk, alternating with the sepales, mostly clawed; *stamens* 6, 4 long, 2 short; *ovary* 1, on the stamenbearing disk; *style* 1 or 0; *stigma* usually 2-lipped; *pericarp* a siliqua or silicula, mostly 2-celled, 2-valved, many-seeded; valves free, opening lengthways; partition membranaceous, margined, central, sometimes prominent or beaked; *perisperm* 0; corculum bent; radicle opposite to the hilum; *seminal leaves* nicked at the tip.—*Stem* herbaceous; *leaves* alternate.

a. Siliculosa. *Pericarp rounded.*

Silicula 1-celled, 1-seeded, 2-valved ..... ISATIS. 435.
Silic. 2-jointed; upper-joint-seeds erect, sessile; lower joint mostly barren ..... CAKILE. 432.
Silic. 2-jointed; upper-joint-seed pedicelled; lower joint mostly barren ..... CRAMBE. 433.
Silic. 2-celled, valveless, 2-seeded ... CORONOPUS. 434.
Silic. 2-celled, 2-valved, not nicked; valves flat; cells many-seeded ..... DRABA. 444.
Silic. 2-celled, 2-valved, not nicked; valves bellied; cells many-seeded; *cotyledons* linear ..... SUBULARIA. 443.
Silic. 2-celled, 2-valved, not nicked; valves bellied; cells 3 or 4-seeded; *style* leaflike ..... VELLA. 436.
Silic. 2-celled, 2-valved, not nicked; valves bellied; cells many-seeded; *cotyl.* incumbent ..... CAMELINA. 445.
Silic. 2-celled, 2-valved, not nicked; valves bellied; cells many-seeded; *cotyl.* accumbent ..... COCHLEARIA. 442.
Silic. 2-celled, 2-valved, not nicked; valves flattish; cells 1-seeded ..... ALYSSUM. 446.

Silic. 2-celled, 2-valved, not nicked,
keeled; cells 2-seeded; *filam.* simple NASTURTIOLUM. 438.
Silic. 2-celled, 2-valved, nicked, keeled;
cells 2-seeded; *filaments* scale-bearing .. TEESDALIA. 439.
Silic. 2 celled, 2-valved, keeled;
cells 1-seeded; *petals* equal ..... LEPIDIUM. 441.
Silic. 2-celled, 2-valved, nicked, keeled;
cells 1-seeded; *petals* 2 larger ..... IBERIS. 440.
Silic. 2-celled, 2-valved, nicked, keeled;
cells many-seeded ..... THLASPI. 437.

b. Siliquosa. *Pericarp long, many-seeded.*

b. 1. *Cotyledons conduplicate; seeds globular; siliqua cylindrical.*

Siliqua valveless, nearly jointed;
cells 2; *sepales* closed ..... RAPHANUS. 430.
Siliqua valveless, nearly jointed;
cell 1; *sepales* closed..... RAPHANISTRUM. 431.
Siliqua 2-valved, nearly 2-jointed;
cells 2; *sepales* spreading ..... SINAPIS. 429.
Siliqua 2-valved; beak barren
or 1-seeded; *sepales* closed ..... BRASSICA. 428.

b. 2. *Cotyledons conduplicate; seeds compressed; siliqua 2 or 4-angled.*

Cot. incumbent, flat; *sepales* upright;
stigma sessile, 2-lobed; siliq. 2 or 4-sided HESPERIS. 427.
Cot. incumbent; *sepales* upright;
stigma-lobes connivent; *longer filam.* dilated
MATTHIOLA. 426.
Cot. incumbent; *sepales* upright;
stigma headed; *siliq.* 4-sided; *seed*
not margined ..... ERYSIMUM. 424.
Cot. incumbent, flat; *sepales* spread;
stigma headed; *siliq.* 4-sided; *seed*
not margined ..... SISYMBRIUM. 423.
Cot. accumbent; *sepales* spread;
siliq. roundish; valves convex, ribless NASTURTIUM. 422.
Cot. accumbent; *sepales* closed,
bagged at the base; *stigma* 2-lobed .. CHEIRANTHUS. 425.

Cot. accumbent; *sepales* connivent;
siliq. 2 to 4-angled; *seeds* one-rowed .... BARBAREA. 421.
Cot. accumbent; *sepales* connivent;
siliq. linear; valves ribbed; *seeds* 1-rowed .. ARABIS. 419.
Cot. accumbent; *sepales* connivent;
siliq. linear; valves ribless; *seeds* 2-rowed CARDAMINE. 418.
Cot. accumbent; *sepales* connivent;
siliq. 2-edged; valves ribbed; *seeds* 2-rowed TURRITIS. 420.

A. *Siliqua* long, 2-valved, 2-celled, 2 or 4-edged; *nectariferous glands 2*; *cotyledons* not folded.

I. 418. CARDAMINE. Dioscorides. *Cuckow-flower.*

Siliqua-edges truncated, linear; valves flat, ribless, often flying back elastically; partition very narrow.—*Flowers* white.

1. *Cardamine bulbifera.* *Bulb-bearing cuckow-flower.*

Stem quite simple; *lower leaves* pinnate, upper simple.

Dentaria bulbifera, *Ger. em.* 984, 1; *Lin. S. P.* 912.
Cardamine bulbifera, *Aiton Hort. Kew.* 102.
Toothed violet. Dog's tooth violet.

Shady places; perennial; April and May.

Root creeping, toothed; *stem* naked at bottom; *upper leaves* bulbiferous in the axillæ; bulbs scaly, dark purple; *corymbus* many-flowered; *corollæ* large, pale purple.

2. *Cardamine bellidifolia.* *Daisy-leaved cuckow-flower.*

Leaves simple, ovate, not in the least cut, one-third the length of the petioles; *flowering stem* as long as the leaves.

Cardamine bellidifolia, *Lin. S. P.* 913.

Alpine grassy places; perennial; August.

Stem 2 in. high, simple, bald; *root-leaves* very longly petioled; *corymbus* terminal, few-flowered; *petals* white; *siliqua* bald, linear.

3. *Cardam. resedæfolia. Dyer's-weed-leaved cuckow-flower.*

Lower leaves ovate, undivided, petioled; upper 3-lobed or pinnate.

Cardamine resedifolia, *Lin. S. P.* 913.

Alpine grassy places; perennial; August.

Stem simple, 3 in. high. Perhaps a variety of the former, as it was considered by Haller.

4. *Cardamine amara.* *Bitter cuckow-flower.*

Leaves pinnate; leaflets of root-leaves roundish, of stem-leaves angularly toothed; *style* oblique; *stigma* rather acute; *stem* rooting at the base.

Cardamine flore majore elatior, *Raii Syn.* 299, 1.
Nasturtium aquaticum amarum, *Park.* 1239, 3.
Cardamine amara, *Lin. S. P.* 915.
Cardamine melanthera, *Stokes Bot. Mat. Med.* 445.
Bitter cress.

Watery places; perennial; April.

Root toothed; *petals* white; *anthers* violet-colour; *siliqua* oblique.—Slightly acrid and bitter, eaten in sallads.

5. *Cardamine pratensis.* *Meadow cuckow-flower.*

Leaves pinnate; root-leaf-leaflets nearly round; stem-leaf-leaflets lanceolate; *style* striated; *stigma* headed.

Cardamine, *Raii Syn.* 299, 2; *Ger. em.* 259.
Nasturtium pratense majus seu Cardamine latifolia, *Park.* 825.
Cardamine pratense, *Lin. S. P.* 915.
Ladies smock, Cheshire. *Cuckow-flower.* *Canterbury bells*, Norfolk.

Damp fields and pastures; perennial; April and May.

Root toothed; *stem* simple; *root-leaves* longly petioled; *corymbus* many-flowered; *flowers* large, purple; *anthers* yellow.—Flowers useful in epilepsy and hysteria, gr. 20 to 90 twice a day; probably anthelmintic: some use the flowering tops.

β. *duplicata.* *Flowers* double.

6. *Cardamine impatiens.* *Touch-me-not cuckow-flower.*

Leaves pinnate; leaflets lanceolate, slightly cut; *stipules* fringed; *petals* linear, or 0.

Cardamine impatiens, vulgo Sium minus impatiens, *Raii Syn.* 299, 3.
Sium minus impatiens, *Ger. em.* 260, 7.
Sium minimum, Noli me tangere dictum, sive impatiens, nasturtii sylvestris folio, *Park.* 1241.
Cardamine impatiens, *Lin. S. P.* 914.

Damp hilly places; annual; May and June.

Stem upright, branchy, angular; *leaves* many-paired; leaflets cut; *stipules* fringed; *fruits* racemose.

7. *Cardamine hirsuta.* *Shaggy cuckow-flower.*

Leaves pinnate, stipuleless; leaflets petioled; root-leaf-leaflets nearly roundish; *stamens* 4 or 5, nearly equal to the petals; *stigmata* nearly sessile.

Cardamine impatiens altera hirsutior, *Raii Syn.* 300, 4.
Cardamine hirsuta, *Lin. S. P.* 915.
Cardamine flexuosa, *Withering Bot. Arr.* 578.
Cardamine parviflora, *Lightfoot Fl. Scot.* 1104.
Cardamine impatiens, *Fl. Dan.* 735.
Hairy cress.

Ruins and damp shady places; annual; May and June.

Herb hairy; *stem* branchy, flexuous, rarely stiff; *siliqua* hairy, slender.

II. 419. ARABIS. Dioscorides. *Turkey-pod.*

Siliquæ linear, crowned with the sessile stigma; valves veined and ribbed; *seeds* in a single row; *cotyledons* accumbent; *calyx* upright.—*Flowers* white.

1. *Arabis stricta.* *Stiff Turkey-pod.*

Leaves toothed, blunt, hispid; root-leaves nearly lyrate; stem-leaves hispid; *petals* upright.

Cardamine pumila, bellidis folio, alpina, *Raii Syn.* 300, 5; *Ger. em.* 260.
Arabis stricta, *Hudson Fl. Angl.* 292.
Arabis hispida, *Aiton Hort. Kew*, 2, 400, not of Linnæus.
Bristol rock-cress.

Stems tufted, upright; *leaves* dark green, rather shining, reddish beneath; hairs simple, rarely forked; *corymbus* few-flowered; *flowers* whitish; *siliquæ* upright, stiff, scarcely torulous.

2. *Arabis hispida.* *Hispid Turkey-pod.*

Root-leaves sinuated, lyrate, longly petioled; stem-leaves mostly uncut, bald; *fruit-bearing peduncles* spreading, half as long as the siliqua.

Cardamine q. Nasturtium petræum Johnsoni, *Raii Syn.* 300, 6.
Arabis hispida, *Lin. Suppl. Pl.* 298.
Sisymbrium arenosum, *Lin. Fl. Suec.* 233, not *Lin. S. P.*
Cardamine petræa, *Hudson Fl. Angl.* 293.
Welch rock-cress.

High alpine rocks; perennial; June and July.

Stems many, tufted, 9 in. high, ascending; *leaves* hairy, hairs forked, spreading; *flowers* purple, or white with a purplish mouth; *petal-limb* horizontal; *siliquæ* torulose.

β. *hastula.* *Leaves* nearly bald, slightly lobed.

Cardamine petræa, *Lightfoot Fl. Scot.* 347.
Cardamine hastulata, *Engl. Bot.* 469.
Alpine rock-cress.

3. *Arabs Thaliana.* *Thalius' Turkey-pod.*

Leaves toothed, hairy; root-leaves oblong, petioled; *stamens* nearly as long as the petals; *siliquæ* ascending.

Turritis vulgaris ramosa, *Raii Syn.* 294, 3.
Paronychia major et altera minor, *Park.* 556.
Arabis thaliana, *Lin. S. P.* 929.
Codded mouse-ear.

Walls and sandy places; annual; April.

Stem branched, upright, hairy; *root-leaves* depressed; stem-leaves petioled; petals white, upright; *siliquæ* bent, ascending; *pedicells* spreading.

4. *Arabis ciliata.* *Fringed Turkey-pod.*

Leaves slightly toothed, oval, bald, fringed; root-leaves nearly sessile, blunt; stem-leaves nearly embracing the stem.

Turritis ciliata, *Willdenow S. P.* 3, 544.
Turritis alpina, *Engl. Bot.* 1746.
Arabis ciliata, *R. Brown in Hort. Kew.* 107.

Sea-shore; perennial; July.

Stem 10 in. high, upright, smooth; *leaves* toothed; *flowers* white; *siliquæ* upright, spreading.

5. *Arabis hirsuta.* *Hairy Turkey-pod.*

Leaves hispid, toothed; stem-leaves nearly embracing the stem; *siliquæ* stiff.

Turritis muralis minor, *Raii Syn.* 294, 2.
Erysimo similis hirsuta planta, *Park.* 834.
Turritis hirsuta, *Lin. S. P.* 930.
Arabis hirsuta, *Scopoli Carn.*
Wall cress. Daisy leaf tower mustard.

Walls and stony places; perennial; May.

Stem upright, 12 in. high, branchy; hairs simple, spreading; *leaf-hairs* some simple, some forked; *petals* white; *siliquæ* erect, afterwards drooping, 4-sided, shining, torulous.

6. *Arabis major.* *Great Turkey-pod.*

Leaves embracing the stem; *siliquæ* flat, thick at the edges; *bracteæ* leafy.

Turritis major, *Ger. em.* 272.
Arabis Turritis, *Lin. S. P.* 920.
Great tower-mustard.

Old walls; biennial; May.

Stem upright, hairy; *leaves* toothed, rather rough; *petals* yellowish-white; *siliquæ* bent down, very long.

III. 420. TURRITIS. Lobel. *Tower-mustard.*

Siliquæ long, 2-edged; valves ribbed, or keeled; *seeds* 2-rowed; cotyledons accumbent.—*Flowers* white.

Turritis glabra. *Bald tower-mustard.*

Root-leaves toothed, hairy; stem-leaves embracing the stem, not in the least cut, bald.

Turritis, *Raii Syn.* 293, 1; *Ger. em.* 272, 1.
Turritis vulgatior, *Park.* 852.
Turritis glabra, *Lin. S. P.* 930.
Tower-mustard. Towers treacle.

Sandy pastures; annual; May and June.

Stem simple, stiff, 2 feet high, bald; *root-leaves* lanceolate; stem-leaves arrowshape; *petals* white, upright; *siliquæ* racemose, hard, pedicelled, upright.

IV. 421. BARBAREA. Dodonæus. *Winter cress.*

Siliquæ 4-sided or 2-edged; *seeds* 1-rowed; cotyledons accumbent; *calyx* upright; *stamens*, the 2 shorter with a gland between them.—*Flowers* yellow.

1. *Barbarea vulgaris.* *Common winter-cress.*

Lower leaves lyrate; terminal lobe rounded; upper leaves reverse ovate, toothed.

Eruca (spuria) lutea seu Barbarea, *Raii Syn.* 297, 2.
Barbarea, *Ger. em.* 243.
Barbarea flore simplici, *Park.* 819.
Erysimum Barbarea, *Lin. S. P.* 912.
Barbarea vulgaris, *Hort. Kew.* 109.
Yellow rocket. Winter cress. Herb St. Barbara.

Ruins and pastures; annual; May to August.

Stem 2 feet high, upright, angular; *leaves* shining, dark green; *sepales* often coloured; *petals* golden yellow; *siliquæ* short, nearly upright. — Herb mucilaginous, nauseously bitter.

2. *Barbarea præcox.* *Early winter-cress.*

Lower leaves lyrate; upper leaves pinnatifid, lobes linear, oblong, not in the least cut.

Eruca spuria q. Barbarea foliis minoribus et frequentius sinuatis, *Raii Syn.* 297, 3.
Erysimum Barbarea β, *Lin. S. P.* 922.
Barbarea præcox, *Hort. Kew.* 109.
Erysimum præcox, *Engl. Bot.* 443.
Belle Isle cress. French cress.

Moist places, also cultivated; biennial; April to October.

Petals pale yellow; *sepales* broad; *siliquæ* long.—Eaten in sallads, has the taste of water cress; flowers frequently double in gardens.

V. 422. NASTURTIUM. Pliny. *Cress.*

Siliquæ nearly cylindrical, sometimes short; valves concave, ribs 0; keel 0; *cotyledons* accumbent; *calyx* spreading.—*Siliquæ* declinate.

1. *Nasturtium officinale.* *Shop cress.*

Leaves pinnate; leaflets ovate, rather heartshape, repand.

Nasturtium aquaticum seu Sisymbrium Cardamine, *Raii Syn.* 300, 1.
Nasturtium aquaticum, sive Cratevæ Sium, *Ger. em.* 251.
Nasturtium aquaticum vulgare, *Park.* 1239.
Sisymbrium Nasturtium, *Lin. S. P.* 916.
Nasturtium officinale, *R. Brown in Hort. Kew.* 110.
Water cress.

Damp places and brooks; perennial; June and July.

Stem declinate, rooting at bottom; *leaves* shining; *petals* white; *siliquæ* spreading.—An excellent spring sallad, antiscorbutic, less acrid than scurvygrass.

β. *præcox.* *Leaves* smaller; *flowers* earlier.

Nasturtium aquaticum foliis minoribus præcocius, *Raii Syn.* 301, 2.

γ. *paucijugatum.* *Leaflets* fewer paired.

Nasturtium aquaticum pinnulis paucioribus, *Dillen in Raii Syn.* 301, 3.

2. *Nasturtium sylvestre.* *Wild cress.*

Leaves pinnate; leaflets lanceolate, serrate or deeply cut.

Eruca (spuria) aquatica, *Raii Syn.* 297, 1; *Ger. em.* 248, 6; *Park.* 1242.
Sisymbrium sylvestre, *Lin. S. P.* 916.
Nasturtium sylvestre, *R. Brown in Hort. Kew.* 110.
Water rocket.

Marshes and river banks; perennial; June to September.

Root creeping; *stem* upright, angular, panicled; *leaves* bald; leaflets decurrent; *petals* gold-yellow; *fruit* racemose.

3. *Nasturtium terrestre.* *Land cress.*

Leaves pinnatifid, toothed, bald; *root* fusiform; *petals* as long as the calyx.

Raphanus aquaticus foliis in profundis lacinias divisis, *Dillen in Raii Syn.* 301, 2.
Sisymbrium terrestre, *Curtis Fl. Lond.*
Sisymbrium palustre, *Willd. S. P.* 3, 49.
Sisymbrium amphibium α, *Hudson Fl. Angl.* 296.
Nasturtium terrestre, *R. Brown in Hort. Kew.*
Water radish.

Inundated places; annual; June to September.

Stem upright, branched; *petals* very small, yellow; *siliquæ* spreading horizontally, racemose.

4. *Nasturtium amphibium.* *Amphibious cress.*

Leaves oblong, lanceolate, pinnatifid, or serrate; *petals* longer than the calyx; *root* fibrous.

Raphanus aquaticus q. Radicula sylvestris seu palustris Joh. Bauhini, *Raii Syn.* 301, 1.
Sisymbrium amphibium, *Lin. S. P.* 917.
Sisymbrium amphibium β, *Hudson Fl. Angl.* 296.
Sisymbrium aquaticum, *Pollich* 2, 230.
Sisymbrium diversifolium, *Stokes Bot. Mat. Med.* 3, 450.
Nasturtium amphibium, *R. Brown in Hort. Kew.* 110.

River-sides; annual; June to August.

Stem rooting, slightly branched; *leaves* simple, sometimes downy; *flowers* yellow; *siliquæ* very short.

β. *pinnatifidum.* *Leaves* pinnately lobed.

Raphanus aquaticus, *Ger. em.* 240, 2.
Sisymbrium amphibium γ, *Lin. S. P.* 917.

VI. 423. SISYMBRIUM. Theophrastus. *Bank-cress.*

Siliquæ nearly cylindrical or angular; *cotyledons* incumbent, sometimes obliquely flat; *calyx* spreading, sometimes rather upright.—*Flower* yellow; *siliquæ* upright.

1. *Sisymbrium officinale.* *Shop bank-cress.*

Siliquæ awlshape, downy, pressed close to the rachis; *leaves* runcinate, hairy; *stem* hispid.

Eruca (spuria) hirsuta, siliqua caule adpressa, Erysimum dicta, *Raii Syn.* 298, 4.
Erysimum Dioscorides Lobelio, *Ger. em.* 254, 1.
Erysimum officinale, *Lin. S. P.* 922.
Sisymbrium officinale, *R. Brown in Hort. Kew.* 111.
Hedge mustard. Scrambling rocket.

Walls and hedges, also cultivated; annual; June, July.

Herb hairy; *stem* 2 feet high, branches spreading; *petals* lemon-yellow. Used as a potherb, is warm and acrid; juice of great use in hoarseness, and ulcers of the throat, made into a syrup, and slowly swallowed.

2. *Sisymbrium latifolium.* *Broad-leaved bank-cress.*

Leaves runcinate, toothed, bald; *stem* smooth; *siliquæ* upright, spread.

Erysimum latifolium Neapolitanum, *Raii Syn.* 298, 2.
Sisymbrium Irio, *Lin. S. P.* 921.
Irio lævis Apulus, erucæ folio, *Column. Ecphr.* 264.

Walls and ruins; annual; July and August.

Herb always quite bald, acrid; *stem* upright, 2 feet high, branched at top; *leaves* pointed; *petals* yellow; *siliquæ* very long.

3. *Sisymbrium absinthioides.* *Wormwood-like bank-cress.*
Leaves doubly pinnate; leaflets linear, terminal leaflet longest; *petals* smaller than the calyx.

Erysimum Sophia dictum, *Raii Syn.* 298, 3.
Sophia chirurgorum, *Ger. em.* 1068, 1; *Park.* 830.
Sisymbrium Sophia, *Lin. S. P.* 920.
Flix-weed. Flux-weed.

Ruins and dunghills; annual; July.
Stem 2 feet high, upright, branchy; *leaflets* decurrent, unequal, slightly hairy; *petals* yellow.—Seeds drank in wine used in the bloody-flux and other profluvia, also against worms; herb used in hysteric cases.

VII. 424. ERYSIMUM. Theophrastus. *Hedge mustard.*
Siliquæ 4-sided; *seeds* not margined, cotyledons incumbent; *stigma* headed or notched, spread on the tube; *calyx* close.

1. *Erysimum cheiranthoides.* *Wallflower hedge mustard.*
Leaves lanceolate, not in the least cut, or few-toothed, hairy, hairs three-parted, stellate; *siliquæ* nearly upright; *peduncles* spreading; *stigma* undivided, nearly sessile.

Erysimum q. myagro affinis Planta siliquis longis Joh. Bauhini, *Raii Syn.* 298, 1.
Camelina sive Myagrum alterum amarum, *Park.* 867.
Camelina, *Ger. em.* 273, 4.
Erysimum cheiranthoides, *Lin. S. P.* 923.
Cheiranthus erysimoides, *Hudson Fl. Angl.* 287.
Treacle wormseed.

Fields and osier-holts; annual; July.
Stem upright, branched at top; hairs pressed to the stem; *sepales* pale yellow; *petals* gold yellow; *siliquæ* racemose; peduncles horizontal.—Seeds anthelminthic.

2. *Erysimum cordifolium.* *Heart-leaved hedge mustard.*
Leaves heartshape, petioled, deeply toothed.

Hesperis allium redolens, *Raii Syn.* 293, 2.
Alliaria, *Ger. em.* 794; *Park.* 112.
Erysimum Alliaria, *Lin. S. P.* 922.
Erysimum cordifolium, *Stokes Bot. Mat. Med.* 4, 458.
Hesperis Alliaria, *De Candolle Fl. Gall.* 4125.
Sauce alone. Jack by the hedge.

Shady hedges; perennial; May.
Herb shining, bald, smelling like garlick; *stem* mostly simple; *petals* white; *siliquæ* upright, very long.—Herb fried, or eaten in sallads; also used as a sauce to saltfish; communicates a rank flavour to poultry that eat it.

VIII. 425. CHEIRANTHUS. Linnæus. *Wallflower.*

Siliquæ compressed or two-edged; *cotyledons* accumbent; *calyx* closed; opposite leaflets bagged at bottom; *stigma* sitting on the style, headed or 2-lobed; lobes spreading.

Cheiranthus fruticulosus. *Shrubby wallflower.*

Leaves lanceolate, pointed, hoary underneath; down quite simple, pressed close to the leaves; *stem* shrubby, branches angular.

Leucojum luteum, vulgo Cheiri flore simplici, *Raii Syn.* 291, 2.
Cheiranthus fruticulosus, *Lint. Mant.* 94.
Cheiranthus Cheiri, *Hudson Fl. Angl.* 287.
Wild wallflower.

Old walls; perennial; May and June.

Stem much branched; *leaves* linear, hairy particularly underneath; *flowers* yellow, odoriferous; *petals* stiff, bent down; *seeds* not winged.

IX. 426. MATTHIOLA. Plumier. *Stock.*

Siliquæ cylindrical or compressed, crowned; *stigma* 2-lobed; lobes connivent, thickened on the back; *cotyledons* incumbent or fastened by the point to the base; *longer filaments* dilated.

1. *Matthiola incana.* *Hoary stock.*

Leaves lanceolate, not in the least cut; *siliquæ* cylindrical, glandular; *stigma-lobes* thicker at the back, or nearly simple.

Cheiranthus incanus, *Lin. S. P.*
Matthiola incana, *R. Brown in Hort. Kew.* 119.

Sea-cliffs; biennial; June and July.

Herb hairy, downy; *stem* much branched; *flowers* purplish crimson, odoriferous; *siliquæ* horned, cylindrical.

2. *Matthiola sinuata.* *Jagged stock.*

Leaves clothlike; lower leaves jagged; *siliquæ* compressed, prickly; *stigma-lobes* thickened on the back or nearly simple.

Leucojum marinum majus, *Raii Syn.* 291, 1; *Park.* 622.
Leucojum marinum purpureum, *Ger. em.* 460, 2.
Cheiranthus sinuatus, *Lin. S. P.* 926.
Chieiranthus tricuspidatus, *Hudson Fl. Angl.* 288.
Matthiola sinuata, *R. Brown in Hort. Kew.* 119.
Purple sea stock-gilliflower.

Sea-shores; biennial; August.

Herb woolly, hairs stellate, entangled; *stem* branched; *leaves* blunt; *flowers* light violet, odoriferous in the evening; *petals* notched; *stigma* 4-cut; *seeds* margined.

X. 427. HESPERIS. Pliny. *Dames-violet.*

Siliquæ 4-sided or 2-edged; *stigma* nearly sessile, lobes connivent; *cotyledons* incumbent, flat; *calyx* close.

Hesperis inodora. *Scentless dames-violet.*

Petal-limb reverse-ovate; *siliquæ* upright, torose, edges plain.

Hesperis sylvestris inodora, *Dillen in Raii Syn.* 293, 1.
Hesperis Pannonica inodora, *Park.* 628, descr. 1682, fig.
Viola matronalis flore purpureo, sive albo, *Ger. em.* 462, 1.
Hesperis matronalis, *Lin. S. P.* 927.
Hesperis inodora, *Lin. S. P.* 929.
Damask violets. Winter gilliflowers. Rogues' gilliflowers. Close sciences.

Pastures and rivulets; perennial; May and June.

Stem branched above, hairs simple or forked; *leaves* rough, woolly on both sides; *flowers* large, purplish red; *peduncles* expanded.

B. *Siliquæ* long, 2-valved, 1-celled, beaked; *cotyledons* conduplicate; *flowers* mostly yellow; *nectariferous glands* 4.

XI. 428. BRASSICA. Pliny. *Colewort.*

Siliquæ 2-valved, beaked; beak barren or 1-seeded; *cotyledons* conduplicate; *calyx* closed.

1. *Brassica macrorhiza.* *Long-rooted colewort.*

Root fusiform, stemforming; *leaves* smooth; upper leaves heartshaped, lanceolate, embracing the stem; lower leaves lyrate.

Napus sylvestris, *Raii Syn.* 295, 1.
Bunias sylvestris Lobelii, *Ger. em.* 235, 2.
Bunias seu Napus sylvestris nostras, *Park.* 865.
Brassica Napus, *Lin. S. P.* 931.
Brassica gongylodes, *Miller Dict.*
Wild navew. Wild rape.

Corn-fields and hedges; biennial; May.

Stem branched, bald; *leaves* glaucous, especially beneath; upper leaves scarcely cut, much spread; *petals* gold-yellow; *siliquæ* spreading; beak angular.

β. *sativa.* *Root* thick.

Bunias, *Ger. em.* 235, 1.
Napus sativus, *Park. Par.* 507.
Rapa Napus, *Miller Dict.*
Navew gentle. French turnep. Colsa. Mowing cabbage. Rape.

Cultivated.

Root nutritive, used as a potherb; *seeds* yield much oil, used in woolcombing and for other purposes; oil-cakes fatten cattle, and are also used as manure.

2. *Brassica sphærorhiza.* *Roundrooted colewort.*

Root stemforming, orbicular, flattened, fleshy; *root-leaves* lyrate, rough; stem-leaves not in the least cut.

Rapa sativa rotunda, *Raii Syn.* 294, 1.
Rapum majus, *Ger. em.* 232, 1.
Brassica Rapa, *Lin. S. P.* 931.
Sinapis Rapa, *Stokes Bot. Mat. Med.* 478.
Turnep. Rape. Knolles.

Edges of fields, also cultivated, in light soils; biennial; April.

Root fleshy; *stem* upright, smooth, branched; *root-leaves* rough, dark green; stem-leaves smooth, rather glaucous; *siliquæ* cylindrical.—Roots nutritive to man and cattle, either raw or dressed; rind slightly acrid; juice of the root with sugar used in colds and hoarsenesses, also fermented for a common sort of cyder; seeds pressed for oil; young shoots used for sallads, or as a potherb.

β. *oblonga.* *Root* oblong.

Rapa sativa oblonga, seu fœmina, *Raii Syn.* 294, 2.
Rapa radice oblonga, *Ger. em.* 232, 2.
Long-rooted turneps.

3. *Brassica oleracea.* *Pot colewort.*

Root stemforming, cylindrical, fleshy; *leaves* bald, glaucous, repand or lobed.

Brassica maritima arborea seu procerior ramosa, *Raii Syn.* 293, 1.
Brassica oleracea α, *Lin. S. P.* 932.
Sea cabbage. Sea colewort.

Cliffs by the sea, also cultivated; biennial; May, June.

Leaves rough, unequally toothed; *flowers* yellow; *siliquæ* torulose.—Roots eatable, but not so tender as those of turnep; leaves eatable, when wild require boiling in two waters to remove the saltness; and when cultivated required to be blanched, by being kept from the light.

β. *viridis.* *Leaves* white with a glaucous tinge.

Brassica vulgaris sativa, *Ger. em.* 312, 1.
Brassica sativa, *Park.* 268.
Garden coleworts.

γ. *subrubens.* *Leaves* red.

Brassica rubra, *Ger. em.* 312, 3.
Red coleworts. Red kale.

δ. *rubra.* *Leaves* red, forming a roundish head before flowering.

Brassica capitata rubra, *Ger. em.* 313, 5.
Red cabbage, Park. Par. 504.

ε. *capitata.* *Leaves* forming, before flowering, a roundish head, smooth.

Brassica capitata alba, *Ger. em.* 312, 4.
Brassica capitata, *Park.* 268.
Cabbage; many varieties in cultivation.

ζ. *Sabauda.* *Leaves* green, forming a roundish head before it flowers, rough.

Brassica patula, *Ger. em.* 315, 6.
Savoy cabbage. Savoy.

η. *glomerosa.* *Leaves* green, forming a roundish head before flowering, edges turned back.

Brassica Sabauda, *Ger. em.* 315, 11.
Savoy colewort.

θ. *Sabellica.* *Leaves* curled at the edges, green.

Brassica sativa crispa, *Ger. em.* 312, 2.
Green kale. Curled coleworts.

ι. *selinoides.* *Leaves* pinnate; leaflets jagged.

Brassica selinoides, *Ger. em.* 315, 13.
Brassica laciniata, *Park.* 269.
Parsley colewort.

κ. *botrytis.* *Stem* forming, before it flowers, a reverse-ovate white head, surrounded by oblong leaves.

Brassica florida, *Ger. em.* 314, 9.
Cole-florie. Cauliflower.

λ. *Italica.* *Stem* forming, before it flowers, several small heads, surrounded and intermixed with oval leaves.

Brassica Sabauda crispa, *Ger. em.* 315, 12.
Brassica florida, *Park.* 269.
Broccoli. Purple broccoli. White broccoli.

μ. *Suecica.* *Stem* globular at the base.

Brassica Napo-brassica, *Hermbstaedt?*
Turnep-rooted cabbage. Chou-navet. Swedish turnep.

ν. *gongylodes.* *Stem* before flowering cylindrical, globular at the top, with shoots from the ends and sides.

Caulorapum rotundum, *Ger. em.* 318.
Round rape cole. Chou-rave. Kael-rabi.

Cultivated for potherbs; the white and green are usually eaten boiled, or raw in sallads; sometimes they are previously salted; the red are generally pickled in vinegar: the roots of the two last varieties are used as turneps for men and cattle.

4. *Brassica Monensis.* *Isle-of-Man colewort.*

Leaves pinnatifid; *stem* rather naked, bald; *siliquæ* short, beak 1-seeded.

Eruca Monensis laciniata lutea, *Raii Syn.* 297, 2.
Sisymbrium Monense, *Lin. S. P. ed.* 1, 658.
Brassica Monensis, *Hudson Fl. Angl.* 291.

Sandy sea-shores; perennial; June and July.

Stem spreading, quite simple, nearly leafless; *leaves* mostly radical, fleshy; lobes nearly equal; *petals* yellow, veined; *siliquæ* upright, spreading, smooth.

5. *Brassica campestris.* *Field colewort.*

Root and *stem* slender; *leaves* heartshape, pointed, embracing the stem; lower leaves lyrate, toothed, slightly hispid.

Brassica campestris, *Lin. S. P.* 931.

Fields; annual; June.

Stem upright, leafy; *leaves* glaucous, paler beneath; *petals* yellow, broad; *siliquæ* veined reticulately, torulose; beak long, striated.

6. *Brassica orientalis.* *Eastern colewort.*

Leaves heartshape, embracing the stem, bald; root-leaves rough, not in the least cut; *siliquæ* 4-sided.

Brassica campestris perfoliata flore albo, *Dillen in Raii Syn.* 293, 2.
Perfoliata siliquosa, *Ger. em.* 536, 2.
Perfoliata siliquosa vulgaris, seu Brassica campestris.
Brassica orientalis, *Lin. S. P.* 931.
Brassica campestris, *Hudson Fl. Angl.* 290.
Codded thorow-wax. White thorow colewort. Hares'-ear cabbage.

Fields and cliffs by the sea; annual; June.

Stem branched from the bottom, leafy, smooth; *leaves* bald, not in the least cut; *petals* small.

XII. 429. SINAPIS. Theophrastus. *Mustard.*

Siliquæ 2-valved, sometimes 2-jointed, upper joint valveless; *cotyledons* conduplicate; calyx spreading.—*Flowers* yellow.

1. *Sinapis arvensis.* *Field mustard.*

Siliquæ many-angled, torose, turgid; beak 2-edged, long.

Sinapi q. Rapistrum arvorum, *Raii Syn.* 295, 2.
Rapistrum arvorum, *Ger. em.* 232, 2; *Park.* 862.
Sinapis arvensis, *Lin. S. P.* 933.
Charlock. Wild mustard. Wild rape. Chadlock. Corn-cale.

Corn-fields; annual; May.

Root woody; *stem* hispid, bristles bent back; *leaves* ovate, toothed, nearly lyrate, petioled, upper leaves sessile; *sepales* green; *petals* yellow; *siliquæ* 8-angled, beak short.—Eaten as cabbage.

2. *Sinapis alba.* *White mustard.*

Siliquæ hispid; beak slanting, very long, swordshape.

Sinapi album siliqua hirsuta, semine albo vel ruffo, *Raii Syn.* 295, 3.
Sinapi album, *Ger. em.* 244, 3.
Sinapis alba, *Lin. S. P.* 933.

Fields and waysides, also cultivated; annual; June.

Lower leaves pinnatifid; upper leaves rather lyrate, rough; *sepales* green; *petals* yellow; *siliquæ* spread, 4-sided; beak rough, as long as the siliqua; *seeds* large, yellow.—Young herb used as a sallad in winter and spring; seeds acrid, but much milder than the black.

3. *Sinapis nigra.* *Black mustard.*

Siliquæ pressed to the stem, bald, 4-sided; *style* awlshape; *upper leaves* linear, lanceolate, not cut.

Sinapi sativum secundum, *Raii Syn.* 295, 1; *Ger. em.* 243, 2.
Sinapis nigra, *Lin. S. P.* 933.

Fields and waysides; also cultivated; annual; June.

Stem much branched, smooth; *leaves* petioled; root-leaves rough; stem-leaves bald; uppermost bent down; *sepales* coloured; *petals* yellow; *siliquæ* upright, bald, many-seeded; beak short.—Seeds acrid, used as a warm sauce, and externally as a rubefacient.

4. *Sinapis tenuifolia.* *Fineleaved mustard.*

Siliquæ linear, bald, upright; beak very short; *peduncles* spreading; *leaves* lanceolate, pinnatifid or doubly pinnatifid; lobes very pointed; *stem* bald.

Eruca sylvestris, *Raii Syn.* 296, 1; *Ger. em.* 246, 2.
Eruca sylvestris vulgatior, *Park.* 818.
Sisymbrium tenuifolium, *Lin. S. P.* 917.
Brassica Erucastrum, *Huds. Fl. Ang. ed.* 1, 253.
Brassica muralis, *Hudson Fl. Angl.* 290.
Sinapis tenuifolia, *R. Brown in Hort. Kew.*
Wall rocket. Wild rocket.

Old walls; perennial; July and October.

Stem much branched, leafy; *leaves* smooth; *flowers* large, citron-yellow; *siliquæ* upright.

5. *Sinapis muralis.* *Wall mustard.*

Siliquæ linear, bald, nearly upright; beak very short; *peduncles* spreading; *leaves* sinuate, bald; *stem* spreading, hairy.

Sisymbrium murale, *Lin. S. P.* 918.
Sinapis muralis, *R. Brown in Hort. Kew.* 128.

Sandy places by the sea; annual; July to September.

Stem rather branched, hairy; hairs bent back; *leaves* lanceolate, unequally serrated, green; *peduncles* very long, rather hispid, racemose; *sepales* bald; *petals* small, citron yellow; *siliquæ* slender.

C. *Siliquæ* long, valveless, 1-celled, jointed; *cotyledons* conduplicate.

XIII. 430. RAPHANUS. Theophrastus. *Radish.*

Siliquæ round, pointed, spongy, valveless, many-celled, torulose; cells membranaceous, in a double longitudinal series; *cotyledons* conduplicate; *calyx* close.

Raphanus sativus. *Cultivated radish.*

Leaves lyrate; *siliquæ* cylindrical.

Raphanus, *Raii Syn.* 296, 1.
Raphanus sativus, *Ger. em.* 237, 1 and 2; *Lin. S. P.* 935.
Raphanus vulgaris, *Park.* 861.
Salmon radish. Rabone.

Cultivated; annual or biennial; May to September.

Root fusiform, reddish; *leaves* lyrate-pinnate, hairy; *siliquæ* bellied at bottom.—Root and young leaves eaten as sallad.

β. *napiformis.* *Root* globular.

Raphanus orbiculatus, *Ger. em.* 238, 3.
Turnep radish.

γ. *nigra.* *Root* fusiform, black.

Raphanus pyriformis, sive radice nigra, *Ger. em.* 238, 4.
Black radish.

XIV. 431. RAPHANISTRUM. Morison. *Wild-radish.*

Siliquæ valveless, many-celled, jointed, becoming necklaceshape; cells bony, in a longitudinal series; *cotyledons* conduplicate; *calyx* closed.—*Petals* veined.

1. *Raphanistrum vulgare.* *Common wild-radish.*

Leaves simply lyrate; *siliqua-joints* smooth.

Raphanistrum siliqua articulata glabra majore et minore, *Raii Syn.* 296, 1.
Raphanus sylvestris, *Ger. em.* 240, 1.
Rapistrum album articulatum, *Park.* 863.
Raphanus Raphanistrum, *Lin. S. P.* 935.
Raphanistrum Lampsana, *Gærtn. Fr. et Sem.* 2, 30.
Raphanus articulatus, *Stokes Bot. Mat. Med.* 483.
White Charlock.

Corn-fields; annual; June and July.

Stem branched at top, hispid; hairs standing out; *leaves* rather rough; *sepales* hispid; *petals* purplish, veined with violet.

β. *flavum.* *Petals* yellow, veined with black.

Raphanistrum q. Rapistrum flore luteo, siliqua glabra articulata, *Raii Syn.* 296, 2.
Sinapis arvensis, *Fl. Dan.* 678.

2. *Raphanistrum maritimum.* *Sea wild-radish.*

Leaves interruptedly lyrate; *siliqua-joints* furrowed.

Raphanistrum q. Raphanus maritimus flore luteo, siliquis articulatis, secundum longitudinem eminenter striatis, *Raii Syn.* 296, 3.
Raphanus Raphanistrum γ, *Smith Fl. Br.* 723.
Raphanus maritimus, *Engl. Bot.* 1643.

Sea beach; also cultivated; biennial; June and July.

Root large, succulent; *leaves* rough, sharply toothed; *petals* yellow, slightly veined.—Root preferred by some to horse-radish; leaves eaten by cattle.

D. *Siliculæ* short, valveless, jointed; cells 1-seeded.

XV. 432. CAKILE. Serapio. *Rocket.*

Siliculæ 2-jointed, joints 1-seeded; upper joint fertile, seed erect, sessile; lower sometimes abortive, seed pendulous.

Cakile maritima. *Sea rocket.*

Joints 2-edged; upper arrowshape; *leaves* pinnatifid, slightly toothed, fleshy.

Cakile quibusdam, aliis Eruca marina et Raphanus marinus, *Raii Syn.* 307.
Eruca marina, *Ger. em.* 248, 5.
Eruca marina Anglica, *Park.* 821.
Bunias Cakali, *Lin. S. P.* 936.
Cakile maritima, *Scop. Carn.* 844.
Cakile Serapionis, *Gærtn. Fr. et Sem.* 2, 207.
Cakile pinnatifida, *Stokes Bot. M. M.* 3, 484.

Sea-shore; annual; June to September.

Herb smooth, fleshy, rather glaucous; *stem* much branched, flexuous, round; *petals* light purple.

XVI. 433. CRAMBE. Hippocrates. *Kale.*

Siliculæ jointed; upper joint nearly globular, seed inverted, inserted by a cord to the bottom of the cell; lower joint abortive, forming a cell-shape pedicell.

Crambe maritima. *Sea kale.*

Filaments long, 2-forked; *silicula* unarmed; *leaves* roundish, sinuated, waved, toothed, glaucous, bald; *stem* bald.

Crambe maritima brassicæ folio, *Raii Syn.* 307.
Brassica marina Anglica, *Ger. em.* 315, 15.
Brassica marina monospermos, *Park.* 270.
Crambe maritima, *Lin. S. P.* 937.
Brassica sectilis, *Bergius Mat. Med. Veg.* 576.
English sea colewort. Sea grape colewort.

Sandy shores by the sea; also cultivated under sand or pots; perennial; May and June.

Herb bald, glaucous; *stem* branched; *leaves* petiolate, waved, sinuated; *flowers* panicled; *petals* white; *stigma* peltate; *silicula* globular.—Herb used as spinage; also eaten by sheep.

E. *Siliculæ* short, valveless, 2-celled; cells 1-seeded.

XVII. 434. CORONOPUS. Theophrast. *Swine's-cress.*

Siliculæ twin, valveless, winged; cells 1-seeded; *cotyledons* incumbent, linear.

a. Coronopus. *Silicula not nicked.*

1. *Coronopus coadunata.* *Joined swine's-cress.*

Silicula not nicked, crested, thorny; *style* porrected; *corymbus* few-flowered.

Nasturtium supinum, capsulis verrucosis, *Raii Syn.* 304, 6.
Coronopus Ruellii, *Ger. em.* 427, 2.
Coronopus recta vel repens Ruellii, *Park.* 502.
Cochlearia Coronopus, *Lin. S. P.* 904.
Coronopus vulgaris, *De Candolle Fl. Gall.* 4239.
Senebiera Coronopus, *Persoon Syn.* 2, 185.
Coronopus coadunatus, *Stokes Bot. M. M.* 3, 440.
Wart-cress. Swine's-cress. Buck's horn. Herb-ivy. Herb Eve.

Roadsides and walls; annual; June to August.

Stem branched, trailing; *leaves* bald, pinnatifid; *lobes* often jag-toothed; *corymbus* lateral, sessile, becoming racémose.

b. Senebiera. *Silicula nicked.*

2. *Coronopus didyma.* *Twin swine's-cress.*

Siliculæ nicked, twin, reticulately wrinkled; *style* very small; *corymbus* many-flowered.

Lepidium didymum, *Lin. Mant.* 92.
Lepidium Anglicum, *Hudson Fl. Angl.* 280.
Coronopus didymum, *Smith Fl. Brit.* 691.
Senebiera pinnatifida, *De Candolle Fl. Franc.* 4238.
Senebiera didyma, *Persoon Syn.* 2, 185.
Lepidium prostratum, *Savi.*
Nasturtiolum pennatum, *Mœnch Meth. Suppl.* 71.

Walls; annual; July.

Stem trailing, hairy; *leaves* pinnatifid; *corymbus* lateral, becoming a long raceme; *stamens* 2 or 4, rarely more.

F. *Siliculæ* short, slightly 2-valved, 1-celled; cells 1-seeded.

XVIII. 435. ISATIS. Dioscorides. *Woad.*

Siliculæ 1-celled, 1-seeded; valves boatshape, tardy in opening; *filaments* toothless, distinct.

Isatis tinctoria. *Dyeing woad.*

Siliculæ reverse-ovate, oblong, bald; *stem-leaves* arrow-shape, bald.

Glastum sativum, *Raii Syn.* 307; *Ger. em.* 491; *Park.* 600.
Isatis tinctoria, *Lin. S. P.* 936.
Woad. Wade.

Corn-fields, also cultivated; biennial; July.

Stem bald; *leaves* glaucous; root-leaves lanceolate; *flowers* panicled, terminal; *sepales* and *petals* yellow; *siliculæ* pendulous, shining.—Herb manufactured into a blue pigment, by being ground, made into balls, dried upon hurdles, then ground again, watered, left to heat, until perfectly dry and mouldy. In Hungary it has been manufactured so as to be equal to indigo, but then it was as expensive. Our female ancestors painted their bodies with it in order to attend their religious ceremonies.

G. *Siliculæ* 2-valved; 2-celled.

XIX. 436. VELLA. Galen. *Cresset.*

Siliculæ bellied; *style* leaflike, ovate; *cotyledons* conduplicate; *calyx* closed.

Vella annua. *Yearling cresset.*

Leaves pinnatifid; *siliquæ* pendulous.

Nasturtium sylvestre erucæ affinis, *Raii Syn.* 304, 3.
Eruca nasturtio cognata tenuifolia, *Ger. em.* 247, 4.
Vella annua, *Lin. S. P.* 895.
Valencia cress. Cress rocket.

Sandy corn-fields; annual; June.

Stem branched, hispid, bristles turned back; *leaves* doubly pinnatifid; *flowers* spiked; spikes terminal, many-flowered; *sepales* purple; *petals* bright yellow veined with violet.

XX. 437. THLASPI. Dioscorides. *Treacle-mustard.*

Siliculæ compressed, nicked; valves 2, boatshape, often winged, many-seeded; *filaments* toothless, distinct, inserted in the mouth of the calyx; *sepales* equal, spreading.

a. *Silicula winged.*

1. *Thlaspi arvense.* *Corn-field treacle-mustard.*

Siliculæ orbiculate; wing dilated, longitudinal; *seeds* concentrically streaked; *leaves* oblong, arrowshape, toothed, bald.

Thlaspi Dioscoridis, *Raii Syn.* 305, 3; *Ger. em.* 262, 1.
Thlaspi drabæ folio, *Park.* 836.
Thlaspi arvense, *Lin. S. P.* 901.
Penny cress. Treacle mustard. Smooth mithridate mustard.

Fields; annual; June and July.

Herb bald; *stem* upright, branched above; *petals* small, not nicked, white; *siliculæ* very large.—Seeds acrid; herb has a garlic flavour, communicates a bad taste to the milk of cows that feed upon it.

2. *Thlaspi alpestre.* *Alp treacle-mustard.*

Siliculæ reverse ovate, retuse; cells 4 to 6-seeded; *style* standing out; *stamens* as long as the petals; *stem-leaves* heartshape, arrowshape; *stem* simple.

Thlaspi foliis globulariæ, *Raii Syn.* 305, 4.
Thlaspi montanum glasti folio minus, *Park.* 842.
Thlaspi album supinum siliquis planis, flore spicato, *Ger. em.* 268, 6, right hand figure.
Thlaspi alpestre, *Lin. S. P.* 903.
Thlaspi montanum, *Hudson Fl. Angl.* 282.
White treacle mustard.

Mountainous pastures; perennial; June and July.

Stems many, nearly upright, simple; *leaves* bald, glaucous; root-leaves in a tuft, ovate; stem-leaves arrowshape; *corymbus* close, small, becoming a very long raceme; *petals* white.

3. *Thlaspi perfoliatum.* *Thorow treacle-mustard.*

Siliculæ reverse heartshape, winged; *style* enclosed, very short; *stem-leaves* heartshape, slightly toothed, bald.

Thlaspi perfoliatum minus, *Raii Syn.* 305, 6; *Park.* 837.
Thlaspi minus Clusii, *Ger. em.* 268, 7.
Thlaspi rotundifolium, *Ger. em.* 266, 1.
Thlaspi perfoliatum, *Lin. S. P.* 902.
Round-leaved mustard.

Chalky pastures; annual; April and May.

Stem branched, spreading, on poor soils simple; *leaves* glaucous, blunt; root-leaves ovate; *corymbus* close, small, growing to a very long raceme; *petals* small, white.

b. Capsella. *Siliculæ wingless.*

4. *Thlaspi cuneatum.* *Wedgeshape treacle-mustard.*

Siliculæ reverse heartshape, wedgeshape; *root-leaves* pinnatifid.

Bursa pastoris, *Raii Syn.* 306; *Ger. em.* 276, 1.
Bursa pastoris major vulgaris, *Park.* 866.
Thlaspi Bursa pastoris, *Lin. S. P.* 903.
Thlaspi cuneatum, *Stokes Bot. M. M.* 3, 434.
Nasturtium Bursa pastoris, *Roth Germ.* 1, 281.
Shepherd's purse. Poor man's spermaceti. Pick-purse. Case-weed.

Walls and road-sides; annual; March to October.

Stem branched; *root-leaves* pinnatifid; stem-leaves oblong; *petals* white: varies much in size, according to the soil.

XXI. 438. NASTURTIOLUM. Bobart. *Dittander.*

Siliculæ elliptic, not nicked; valves 2, boatshape, wingless; cells 2-seeded; *filaments* toothless.

Nasturtiolum montanum. *Mountain dittander.*

Leaves pinnate, not in the least cut; *petals* not longer than the calyx; *siliculæ* blunt each way; *stigma* sessile.

Nasturtium q. Nasturtiolum montanum annuum tenuissime divisum Bobart, *Raii Syn.* 304, 4.
Lepidium petræum, *Lin. S. P.* 899.
Lepidium Linnæi, *Crantz Austr.* 1, 7.
Hutchinsia petræa, *R. Brown Hort. Kew.* 82.

Limestone rocks; biennial; March and April.

Stem 2 in. high, branchy; *leaves* bald; *petals* white.

XXII. 439. TEESDALIA. R. Brown. *Heath-cress.*

Siliculæ nicked; valves boatshape; cells 2-seeded; *filaments* with a small scale at the bottom, on the inner side.

Teesdalia irregularis. *Irregular heath-cress.*
Leaves lyrate; *petals* irregular.

Nasturtium petræum, *Raii Syn.* 303, 2.
Bursa pastoria minima, *Ger. em.* 276, 2.
Iberis nudicaulis, *Lin. S. P.* 907.
Teesdalia nudicaulis, *R. Brown in Hort. Kew.* 4, 88.
Shepherd's cress. Small shepherd's purse.

Barren heaths; annual; May.
Stems many, mostly simple; central upright, stiff, mostly leafless; side-stems ascending, leafy; *root-leaves* lying flat; *corymbi* at first in heads, become racemose.

XXIII. 440. IBERIS. Dioscorides. *Candy-tuft.*
Siliculæ nicked, valveless, boatshaped, winged; cells 1-seeded; *petals* unequal.

Iberis amara. *Bitter candy-tuft.*
Plant herbaceous; *leaves* lanceolate, rather pointed, slightly toothed, bald; *flowers* racemose.

Thlaspi amarum, *Ger. em.* 263, 5.
Iberis amara, *Lin. S. P.* 906.
Clown's mustard.

Chalky fields; annual; July.
Herb bald, bitter; *stems* diffused, branched; *leaves* lanceolate; *corymbi* spiked, many-flowered; *petals* white.

XXIV. 441. LEPIDIUM. Dioscorides. *Pepper-wort.*
Siliculæ 2-valved; valves boatshaped; cells 1-seeded; *petals* equal.

a. Lepidium. *Siliculæ not nicked, margined all round.*

1. *Lepidium latifolium.* *Broadleaved pepperwort.*
Leaves lanceolate, undivided, serrated or uncut; *siliquæ* oval, not nicked.

Lepidium latifolium, *Raii Syn.* 304; *Lin. S. P.* 899.
Raphanus sylvestris officinarum Lepidium, Æginetæ Lobelii, *Ger. em.* 241, 2.
Piperitis, sive Lepidium vulgare, *Park.* 855.
Dittander. Pepperwort.

Salt marshes and clifts by the sea; perennial; July.
Stem 3 feet high, upright, branched, panicled; *leaves* glaucous, pointed; *petals* white, not cut; *stamens* 6.—Plant acrid, antiscorbutic; in infusion vomitive.

b. Thlaspidium. *Siliculæ notched, or margined.*

2. *Lepidium ruderale.* *Ruin Pepperwort.*

Root-leaves pinnatifid; branch-leaves linear, not nicked; *flowers* 2-stamened; *petals* 0; *siliquæ* notched, spreading.

Nasturtium sylvestre osyridis folio, *Raii Syn.* 303, 1; *Park.* 829.
Thlaspi minus, *Ger. em.* 303, 1.
Lepidium ruderale, *Lin. S. P.* 900.
Thlaspi ruderale, *De Candolle Fl. Gall.* 4266.
Bowyers' mustard. Narrowleaved wild cress.

Walls by the sea; biennial; June.

Stem 1 foot high, upright, branched, flexuous, woolly; *leaves* fleshy, bald; lower leaves pinnatifid; upper linear; *flowers* very small; *racemes* when in fruit very long.

3. *Lepidium campestre.* *Champaign pepperwort.*

Stem-leaves arrowshape, toothed; *siliculæ* ovate, not notched, winged, glandularly dotted.

Thlaspi vulgatius, *Raii Syn.* 305, 1.
Lepidium campestre, *Lin. S. P.* 902.
Common cow-cress. Mithridate mustard. Bastard cress.

Corn-fields and rubbish; annual; June and July.

Stem 1 foot high, paniculately branched; *leaves* woolly; *siliqua-valves* margined, bald; *styles* very short; *petals* small.

β. *glabrum.* *Leaves* nearly bald, broad.

Thlaspi vaccariæ folio glabrum, *Raii Syn.* 305, 5.
Thlaspi vulgatissimum, *Ger. em.* 262, 2.

γ. *hirtum.* *Siliculæ* hirsute, dotted with glands.

Thlaspi hirtum, *Hudson Fl. Angl.* 281.

4. *Lepidium hirtum.* *Rough pepperwort.*

Stem-leaves arrowshape, toothed, hairy; *siliculæ* elliptic oblong, nicked, winged, hairy, not dotted.

Thlaspi vaccariæ incano folio perenne, *Raii Syn.* 305, 2.
Lepidium hirtum, *Lin. S. P.* 901.
Hoary cress. Hairy Mithridate mustard.

Mountains; biennial? June and July.

Stem 2 feet high, branched; *siliquæ* more oblong than those of L. campestre.

5. *Lepidium sativum.* *Cultivated pepperwort.*

Leaves many-cut, oblong; *cotyledons* 3-parted.

Nasturtium hortense, *Ger. em.* 250, 1.
Nasturtium sativum, *Park. Par.* 501.
Lepidium sativum, *Lin. S. P.* 899.
Garden cress. Town cress. Garden karsse.

Cultivated and naturalized; annual; June and July.

Stem branched; *leaves* not nicked, curled.—*Herb*, while young, eaten as a warm sallad; *seeds* diaphoretic, promote absorption.

XXV. 442. COCHLEARIA. Gesner. *Scurvy-grass.*

Siliculæ nearly ovate, many-seeded; valves bellied; *seeds* not margined; cotyledons incumbent; *filaments* short, toothless; *calyx* open.

a. Cochlearia. *Annual.*

1. *Cochlearia rotundifolia.* *Round-leaved scurvy-grass.*

Siliculæ nearly round; *root-leaves* kidneyshape.

Cochlearia, *Raii Syn.* 302, 1.
Cochlearia rotundifolia, *Ger. em.* 401.
Cochlearia major rotundifolia, sive Batavorum, *Park.* 285.
Cochlearia officinalis, *Lin. S. P.* 903.
Scurvy-grass. Scruby grass. Spoonwort.

Sea-side; annual; May and June.

Herb bald, fleshy; *stem* angular; branches corymbose; *root-leaves* round, petioled; stem-leaves embracing the stem, oblong, sinuated; *corymbus* many-flowered; *siliquæ* globular, slightly wrinkled and veined, crowned with a very short style.

β. *alpina.* *Plant* small; *leaves* fleshy; *flowers* reddish, large.

Cochlearia rotundifolia, *Dillen in Raii Syn.* 302, 2.
Cochlearia Grœnlandica, *Lin. S. P.* 903.

2. *Cochlearia ovalifolia.* *Oval-leaved scurvy-grass.*

Siliculæ elliptic; *root-leaves* ovate, not nicked; stem leaves, lanceolate, toothed.

Cochlearia folio sinuato, *Raii Syn.* 303, 3.
Cochlearia Britannica, *Ger. em.* 401, 2.
Cochlearia vulgaris, *Park.* 285.
Cochlearia Anglica, *Lin. S. P.* 903.
Cochlearia ovatifolia, *Stokes Bot. M. M.* 3, 436.
Sea scurvy-grass.

Sea-shores on mud, also cultivated; annual; May.

Leaves fleshy: root-leaves longly petioled; *flowers* white; *siliquæ* wrinkled reticulately, crowned with a very long style.—Herb acrid, but eaten as a sallad, powerfully antiscorbutic; the juice, distilled water, and a conserve of the leaves, are also employed in the true or sea-scurvy, the asthma, and rheumatism: it does not seem altered by cultivation in gardens.

3. *Cochlearia hederacea.* *Ivy scurvy-grass.*
Siliculæ elliptic; *leaves* deltoid.

Cochlearia marina folio angulo parvo, *Raii Syn.* 303, 5.
Thlaspi hederaceum, *Ger. em.* 271, 5; *Park.* 848.
Cochlearia Danica, *Lin. S. P.* 903.
Ivy mustard.

Muddy sea-shores; annual; May and June.

Leaves petioled, 3 or 5-lobed; *petals* small; *siliculæ* elliptic, scarcely swollen, reticulately veined, crowned with a short style.

b. Armoracia. *Perennial.*

4. *Cochlearia lancifolia.* *Lanceleaved scurvy-grass.*
Siliculæ oblong; *stigma* dilated, nearly sessile; *root-leaves* oblong, crenate; stem-leaves lanceolate, toothed or deeply cut.

Raphanus rusticanus, *Raii Syn.* 301; *Ger. em.* 241, 1; *Park.* 860.
Cochlearia Armoracia, *Lin. S. P.* 904.
Cochlearia lancifolia, *Stokes Bot. M. M.* 437.
Horse-radish.

Watery places, also cultivated; perennial; May.

Root white, cylindrical, very long, acrid; *stem* upright, corymbose; *root-leaves* petioled, large, sometimes pinnatifid; stem-leaves sessile; *petals* white; *siliculæ* elliptic, with a very short style and broad stigma; usually barren, increasing only by its root.—Root scraped used as sauce, eaten by itself it induces difficulty of breathing; the infusion in milk is employed as a cosmetic; also used in palsy and dropsy as a stimulant and diuretic; the distilled water is acrid and stimulant.

XXVI. 443. SUBULARIA. Ray. *Awl-wort.*

Siliculæ valvular, not notched, many-seeded; valves bellied; *cotyledons* incumbent, linear.

Subularia aquatica. *Water awl-wort.*
Stem 0; *leaves* awlshape.

Subularia erecta, junci foliis acutis, mollibus, *Raii Syn.* 307.
Subularia aquatica, *Lin. S. P.* 896.
Irish rush-cress.

Alpine lakes on gravel; annual; July.

Plant immersed; *leaves* radical, bald; *scape* twice as long as the leaves, racemose; *flowers* pedicelled; *petals* white, connivent.

XXVII. 444. DRABA. Dioscorides. *Whitlow-grass.*

Siliculæ not notched, oval; valves flat, or slightly convex; cells many-seeded; *seeds* margined; cotyledons accumbent; *filaments* toothless.

1. *Draba verna.* *Spring whitlow-grass.*

Scape naked; *leaves* oblique, pointed, hirtous, slightly serrate; *petals* 2-cut.

Paronychia vulgaris, *Raii Syn.* 292, 1; *Ger. em.* 624, 1.
Paronychia vulgaris alsines folio, *Park.* 556.
Draba verna, *Lin. S. P.* 896.
Common whitlow grass. Whiteblow. Nailwort.

Walls; annual; March and April.

Leaves radical, hairy; hairs simple or forked; *scape* upright, simple, racemose; *petals* white; *siliculæ* bald crowned by a sessile persistent stigma.—Eaten as a sallad, also used in whitlows or felons.

2. *Draba rupestris.* *Rock whitlow-grass.*

Scape naked or 1-leaved; *petals* not cut; *siliculæ* lanceolate, downy; *leaves* flat, lanceolate, hairy.

Draba hirta, *Smith Fl. Brit.* 677, not of Linnæus.
Draba stellata, *Dickson Tr. Lin. Soc.* 2, 288.
Draba rupestris, *R. Brown in Hort. Kew.* 91.

Alpine rocks; perennial; May and June.

Roots tufted; *leaves* radical, lanceolate, fringed; sometimes hairy beneath; hairs quite simple, ascending; *scape* simple; *racemes* corymbose; *calyx* hairy; *petals* white; *siliculæ* generally hairy, sometimes bald; hairs very short, forked.

3. *Draba incana.* *Hoary whitlow-grass.*

Leaves cauline, many, hoary, slightly toothed; *siliculæ* oblong, bald, twisted.

Lunaria contorta major, *Raii Syn.* 291, 1.
Draba incana, *Lin. S. P.* 897.
Wreathed cress.

Limestone rocks; biennial; May and June.

Plant woolly; hairs short, stellate, entangled; *stem* simple or branched above; *leaves* sessile, ovate, ribbed; *calyx* hairy; *petals* nicked; *siliculæ* twisted, bald, with a very short style; *pedicells* very short.

β. *minor.* *Plant* small.

Lunaria q. Paronychiæ similis sed major, perennis Alpina repens, *Raii Syn.* 292, 2.

4. *Draba muralis.* *Wall whitlow-grass.*

Stem branched; *leaves* ovate, embracing the stem, toothed; *siliculæ* spreading, bald.

Paronychia q. Bursan pastoris major loculo oblongo C. Bauhini, *Raii Syn.* 292, 2.
Draba muralis, *Lin. S. P.* 897.

Shady hills; annual; May.

Stem branchy from the bottom, hairy; hairs stellate; *leaves* heartshape, hairy; hairs simple or forked; *flowers* numerous, corymbose, changing to a very long raceme; *petals* not nicked; *siliculæ* flat, bald, half as long as the pedicells, crowned with a very short style.

5. *Draba aizoides.* *Sengreen whitlow-grass.*

Scapes naked, bald; *leaves* lanceolate, linear, stiff, keeled; *stamens* equal to the petals; *style* half as long as the ovary.

Sedum petræum, *Ger. em.* 514, 8.
Draba aizoides, *Lin. Mant.* 91.
Mœnchia aizoides, *Roth Germ.* 273.
Small rock sengreen.

Walls and alpine rocks; perennial; March.

Roots fibrous, many-headed; *leaves* radical, rosaceous, perennial, 1-ribbed, shining, fringed; fringe white, stiff; *scapes* solitary; *petals* nicked, gold-yellow; *siliculæ* bald, crowned by a long style.

XXVIII. 445. CAMELINA. Crantz. *Cameline.*

Siliculæ nearly ovate, many-seeded; valves bellied; *cotyledons* incumbent; *filaments* toothless.

Camelina sativa. *Cultivated cameline.*

Siliculæ reverse-ovate, margined; *stigma* simple; *leaves* lanceolate, arrowshape.

Myagrum, *Raii Syn.* 302; *Ger. em.* 273, 3.
Myagrum sativum, *Park.* 867; *Lin. S. P.* 894.
Myagrum sylvestre, seu Pseudomyagrum, *Park.* 868.
Mœnchia sativa, *Gmelin Syst. Nat.* 2, 971.
Camelina sativa, *Crantz. Austr.* 1, 17.
Gold of pleasure. Sesamum.

Corn-fields, and among flax, naturalized; annual; June.

Stem upright, downy, panicled at top; *corymbus* many-flowered, changed to very long racemes; *petals* yellow, not nicked; *siliculæ* upright, not notched, reverse-ovate, not margined.—Cultivated for the oil yielded by its seeds.

XXIX. 446. ALYSSUM. Dioscorides. *Alysson.*

Siliculæ nearly round; valves more or less compressed; cells 1 to 4-seeded; *seeds* margined; cotyledons accumbent.

Alyssum maritimum. *Sea alysson.*

Siliculæ not notched, bald; cells 1-seeded; *filaments* toothless; *leaves* linear, lanceolate, pointed, slightly hoary; hairs 2-parted, pressed close.

Alyssum minimum, *Lin. S. P.* 908.
Alyssum maritimum, *Willd. S. P.*
Alyssum halimifolium, *Lin. S. P.* 907.
Sweet cameline.

Sea cliffs, naturalized; perennial; August, September.

Flowers many, white, odoriferous; *petal-claws* and *stamens* blue, becoming purple.

Fam. XVI. 81. FUMARIDEÆ.

Calyx 2-sepaled, deciduous; *petals* 4, irregular; lower petals mostly spurred; *stamens* definite, diadelphous; *ovary* 1; *style* 1; *stigma* cut, persisting; *pericarp* capsular or siliquose, 1-celled, or many-seeded; *seeds* peritropal, parietal; perisperm fleshy; corculum small, bent; cotyledons very short; radicle below.

Pericarp globular, valveless, 1-seeded .. FUMARIA. 447.
Per. podshaped, 2-valved, many-seeded CORYDALIS. 448.

I. 447. FUMARIA. Gesner. *Fumitory.*

Calyx very small; *petals* 4, irregular, 1-spurred; *stamens* diadelphous; *androphores* 2; *anthers* 3 to each androphore; *pericarp* spherical, valveless, 1-celled, 1-seeded; *seed* affixed by the umbilical cord to the inner surface of the capsule.

1. *Fumaria parviflora.* *Small-flowered fumitory.*

Stem branched, trailing; *leaves* more than twice compounded; leaflets 3-parted, linear, channelled; *spikes* loose.

Fumaria spicata β, *Lin. Syst. Veg.*
Fumaria tenuifolia, *Symons Syn.* 200.
Fumaria parviflora, *Lamarck Enc. Meth.* 2, 567.

Fields; annual; August and September.

Leaf-lobes very narrow, convex beneath; *flowers* small, pale.

2. *Fumaria officinalis.* *Shop fumitory.*

Stem branched, trailing; *leaves* more than twice compounded; leaflets wedgeshape, lanceolate, cut; *pericarp* globular, retuse.

Fumaria vulgaris, *Raii Syn.* 204, 1; *Park.* 287.
Fumaria purpurea, *Ger. em.* 1088, 1.
Fumaria officinalis, *Lin. S. P.* 984.
Common fumiterre. Fumus terræ.

Fields and gardens; annual; May to August.

Plant glaucous; *stem* angular; leaf-lobes dilated; *spike* loose, opposite to the leaves; *petals* rose-colour, blood-red at the tip, keel green; *pericarp* smooth, retuse and umbilicated at the tip.—Juice of the plant alterative, useful in scurvy and other chronic diseases; also as a cosmetic.

3. *Fumaria capreolata.* *Tendrilled fumitory.*

Stem branched, climbing; *leaves* ternate; leaflets reverse ovate, wedgeshape, cut; *partial petioles* cirrhus-like convolute.

Fumaria major scandens, flore pallidiore, *Raii Syn.* 204, 2.
Fumaria capreolata, *Lin. S. P.* 985.
Fumaria officinalis β, *Hudson Fl. Angl.* 309.

Corn-fields; annual; June to September.

Stem 3 feet high, very much branched; *petioles* cirrhus-like, twisted; *leaves* bipinnate; leaflets broad, green; *spike* loose, few-flowered; *flowers* large; *calyx* large; *pericarp* shining; tip 2-scrobiculate.

II. 448. CORYDALIS. De Candolle. *Corydale.*

Calyx very small; *petals* 4, irregular, 1-spurred; *stamens* diadelphous; *anthers* 1 to 3 to each androphore; *capsule* siliqua-form, 1-celled, 2-valved, many-seeded; *placentaria* 2, threadlike, within the sutures of the valves.

1. *Corydalis clavicula.* *Tendrilled corydale.*

Stem branched, climbing; *lower leaves* biternate; upper leaves ternate, cirrhose; *root* fibrous; *pericarp* lanceolate, 2 or 3-seeded.

Fumaria alba latifolia, *Raii Syn.* 335; *Park.* 288.
Fumaria alba latifolia clavicula, *Ger. em.* 1088, 2.
Fumaria claviculata, *Lin. S. P.* 985.
Corydalis claviculata, *De Candolle Fl. Gall.* 4100.
Climbing fumitory.

Hedges; annual; June and July.

Stem reddish, flattened; *leaves* juicy, thin, beneath glaucous; *spike* few-flowered; *petals* white.

2. *Corydalis digitata.* *Fingered corydale.*

Stem simple; *raceme* terminal; *bracteæ* wedgeshape, fingered, longer than the peduncle; *leaves* biternate; *root* bulbous, solid.

Radix cava minor, *Ger. em.* 1091, 9.
Fumaria bulbosa γ, *Lin. S. P.* 983.
Fumaria Halleri, *Willd. S. P.* 863.
Fumaria digitata, *Curtis Bot. Mag.* 231.
Fumaria solida, *Lin. MS. notes in Sp. Pl.*; *Smith Fl. Brit.* 748.
Fumaria minor, *Roth Germ.* 1, 300.
Fumaria intermedia, *Withering Bot. Arr.* 620; not of Errhart.
Corydalis bulbosa, *De Candolle Fl. Gall.* 4098.
Corydalis digitata, *Persoon Syn.* 2, 289.
Bunnikens holwort.

Woods; perennial; April and May.

Stem upright, simple, rarely 2-cut, cylindrical; *leaves* few, leaflets cut at the tip; *spike* solitary; *petals* pale at bottom, purple at the tip; *spur* cylindrical, as long as the peduncle; *pericarp* short, many-seeded.

3. *Corydalis lutea.* *Yellow corydale.*

Stem diffuse, branched, angular; *bracteæ* minute; *leaves* bipinnate; *pericarp* round, shorter than the peduncle; *spur* short, rounded.

Fumaria lutea, *Ger. em.* 1088, 4; *Lin. Mant.* 2, 258.
Fumaria capnoides, *Withering Bot. Arr.* 620, not of Linnæus.
Capnoides lutea, *Gærtner Fr. et Sem.* 2, 163.
Corydalis lutea, *De Candolle Fl. Gall.* 4099.
Yellow fumiterre.

Old walls; perennial; May.

Root fibrous; *stem* upright, 3-sided, leafy; leaflets broad, wedgeshape; *bracteæ* ovate, serrated; *petals* yellow; *spur* bent.

Fam. XVII. 82. PAPAVERACEÆ.

Calyx free, mostly 2-sepaled, deciduous; *petals* hypogynous, mostly 4; *stamens* many, indefinite; *ovary* 1; *style* mostly 0; *stigma* divided, persisting; *fruit* capsular or siliquose, 1-celled, many-seeded; *seeds* peritropal, on parietal receptacles, half-covered with membranaceous involucra; perisperm fleshy; corculum straight; radicle below. —*Plants* herbaceous, lactescent; *leaves* alternate, pinnatifid; *flowers* solitary and terminal, or umbelled.

Stigma 2-lobed; *siliqua* 2-valved, 1-celled; *seed* crested; *ped.* umbelled ..... CHELIDONIUM. 449.
Stigma 2 or 3-lobed; *siliqua* 2 or 3-valved, 2 or 3-celled; *seed* granulated; *ped.* 1-flowered ..... GLAUCIUM. 450.
Stigma radiated; *pericarp* oblong, 4-ridged, appearing 4-valved; *peduncle* 1-flowered ..... CERASTITES. 451.
Stigma radiated; *pericarp* ovate, ridgeless, appearing many-celled; holes many under the stigma ..... PAPAVER. 452.

I. 449. CHELIDONIUM. Dioscorides. *Celandine.*

Calyx 2-leaved; *petals* 4; *stigma* capitate, 2-lipped; *pericarp* long, linear, 1-celled, 2-valved; *seeds* many, crested. —*Flowers* umbelled, axillary, yellow; *juice* yellow.

1. *Chelidonium majus.* *Great celandine.*
Leaves pinnatifid; lobes blunt, crenated; *petals* not nicked.

Papaver corniculatum luteum, Chelidonia dictum, *Raii Syn.* 309, 9.
Chelidonium majus, *Ger. em.* 1069, 1; *Lin. S. P.* 723.
Chelidonium majus vulgare, *Park.* 616.
Swallow wort. Tetter wort.

Damp shady places; perennial; May and June.
Stem branched; *leaves* bald, slightly glaucous; *umbells* solitary, peduncled; *calyx* slightly hairy.—Juice yellow, acrid, destroys warts, and is used for tetters, ringworms, the jaundice, and the itch; diluted with milk consumes spots on the eyes.

2. *Chelidonium laciniatum.* *Jagged celandine.*
Leaves pinnatifid; lobes acutely cut; *petals* lanceolate.

Papaver q. Chelidonium majus foliis quernis, *Dillen in Raii Syn.* 309, 9*.
Chelidonium majus, folio majus dissecto, *Ger. em.* 1069, 2.

Old walls; perennial; May to July.

II. 450. GLAUCIUM. Dioscorides. *Horned-poppy.*

Calyx 2-sepaled; *petals* 2; *stigma* capitate, 2 or 3-lipped; *pericarpium* long, linear, 2 or 3-valved; apparently 2 or 3-celled; seeds many, dotted.—*Flowers* solitary, terminal or axillary, peduncled; *juice* colourless.

a. *Pericarp 2-valved, apparently 2-celled.*

1. *Glaucium luteum.* *Yellow horned-poppy.*

Stem bald; *leaves* embracing the stem, sinuated; *pericarpium* tuberculated.

Papaver corniculatum luteum, *Raii Syn.* 307, 7; *Park.* 261.
Papaver cornutum flore luteo, *Ger. em.* 367, 1.
Chelidonium Glaucium, *Lin. S. P.* 724.
Glaucium luteum, *Gærtner Fr. et Sem.* 2, 166.

Sandy shores of the sea; annual; July and August.

Herb glaucous; *stem* branched, spreading; *root-leaves* lyrate pinnatifid, rough; stem-leaves embracing the stem; *sepales* hispid; *petals* large, rounded; *pericarpium* very long, bent.

2. *Glaucium phœnicium.* *Red horned-poppy.*

Stem hispid; *leaves* sessile, pinnately cut; pericarpium bristly.

Papaver cornutum flore rubro, *Ger. em.* 367, 2.
Chelidonium corniculatum, *Lin. S. P.* 724.
Glaucium phœnicium, *Gært. Fr. et Sem.* 2, 165.
Glaucium corniculatum, *Curtis Fl. Lond.*

Sandy corn-fields; annual; June and July.

Leaves hispid, glaucous; *root-leaves* lyrately pinnatifid; stem-leaves embracing the stem; *petals* reddish; *pericarpium* hairy, hairs pressed to the pericarpium.

b. *Pericarpium 3-valved, 1-celled.*

3. *Glaucium violaceum.* *Violet horned-poppy.*

Stem smooth; *leaves* bipinnatifid; lobes linear, bald; *pericarpium* 3-valved.

Papaver corniculatum violaceum, *Raii Syn.* 309, 8.
Papaver cornutum flore violaceo, *Ger. em.* 367, 4.
Chelidonium hybridum, *Lin. S. P.* 724.
Chelidonium violaceum, *Lamarck Fl. Fr.* 3, 169.
Glaucium violaceum, *Jussieu Gen.* 236.

Corn-fields; annual; May and June.

Stem branched; *leaves* dark green, sometimes tripinnatifid; *petals* violet; *stigma* 3-cut.

III. 451. CERASTITES. *Beaked-poppy.*

Calyx 2-sepaled, deciduous; *petals* 4, rarely 6; *stigma* 4 to 8-rayed; *capsule* oblong, 4-ribbed; valves opening only at the tip; imperfectly 4-celled; *seeds* many.—*Flowers* solitary, terminal; hairs pressed to the peduncle.

a. *Capsule bald; style long; petals and juice yellow.*

1. *Cerastites Cambrica.* *Welch beaked-poppy.*

Capsule oblong, bald; *stem* many-flowered, rather smooth; *leaves* pinnate; leaflets cut, glaucous beneath.

Papaver luteum perenne, laciniato folio, Cambro-britannicum, *Raii Syn.* 309, 5.
Argemone lutea Cambro-britannica, *Park.* 369.
Papaver Cambricum, *Lin. S. P.* 727.
Yellow bastard-poppy.

Shady mountainous places; perennial; June.

Stem 1 foot high, slightly hairy; hairs erect; *leaf-main-rib* winged; leaflets bald; *sepales* hairy; *petals* lemon-yellow.

b. *Capsule bald; style* 0; *petals red; juice colourless.*

2. *Cerastites dubia.* *Doubtful beaked-poppy.*

Capsule oblong, bald; *stems* many-flowered, hairy; *peduncle-hairs* pressed to the peduncle; *leaves* bipinnatifid.

Papaver laciniato folio, capitulo longiore glabro, *Raii Syn.* 309, 5.
Papaver dubium, *Lin. S. P.* 726.

Sandy fields; annual; June and July.

Stem 2 feet high, hairy; hairs spreading; *leaf-lobes* broad; *petals* pale scarlet; *stamens* linear; pollen yellow; *capsule* 3 times longer than broad.

3. *Cerastites laciniata.* *Jagged beaked-poppy.*

Capsules ovate, oblong, bald; *stem* many-flowered, hairy; hairs spreading; *leaves* hairy, bipinnatifid, lobes much cut.

Papaver dubium, *Fl. Dan.* 902.
Papaver dubium 2, *Withering Bott. Arr.* 597.

Fields and parks; annual; June.

Capsule only twice as long as broad; *calyx* hairy, hairs glandular.

c. *Capsule spinous; style* 0; *petals red.*

4. *Cerastites hybrida.* *Mongrel beaked-poppy.*

Capsule nearly globular, torose, hispid; *stem* leafy, many-flowered.

Papaver laciniato folio, capitulo hispido rotundiore, *Raii Syn.* 308, 4.
Argemone capitulo torulo, *Ger. em.* 373, 1.
Argemone capitulo rotundiore, *Park.* 369.
Papaver hybridum, *Lin. S. P.* 725.

Fields; annual; July.

Stem slender, branched, hispid; bristles inclined to the stem; *leaves* 3-parted, pinnatifid; lobes linear, awned, hispid; *branches* naked, 1-flowered; *calyx-bristles* yellow; *petals* scarlet, violet at the base; *stigma* 6 or 8-rayed; *capsule-bristles* ascending, bent.

5. *Cerastites macrocephala.* *Longheaded beaked-poppy.*
Capsule clubshape, hispid; *stem* leafy.

Papaver laciniato folio, capitulo hispido longiore, *Raii Syn.* 308, 3.
Argemone capitulo longiore, *Ger. em.* 313, 2; *Park.* 370.
Papaver Argemone, *Lin. S. P.* 725.

Fields; annual; June and July.

Stems many-flowered; *bristles* spreading; *petals* pale scarlet; *stigma* 4 or 5-rayed; *capsule* 5-sided above; *flowers* sometimes double.

β. *maritima.* *Stem* 1-flowered.

Papaver maritimum, *Withering Bot. Arr.* 486.

IV. 452. PAPAVER. Pliny. *Poppy.*

Calyx 2-sepaled, falling off; *petals* 4; *stigma* 10 or 12-rayed; *pericarpium* ovate, smooth, ribless, valveless, opening by many foramina under the stigma, incompletely many-celled; *seeds* many, affixed to placentaria on the sides of the pericarpium.—*Flowers* solitary; *hairs* spreading.

a. *Capsule smooth; calyx hairy; leaves pinnatifid.*

1. *Papaver erraticum.* *Wild poppy.*
Capsule bald, nearly globular; *stem* many-flowered, hispid; *hairs* on all parts spreading; *leaves* pinnatifid; *stigma* 10-rayed.

Papaver laciniato folio, capitulo breviore glabro annuum, Rhœas dictum, *Raii Syn.* 308, 2.
Papaver Rhœas, *Ger. em.* 371 (misprinted 401), 1; *Lin. S. P.* 726.
Papaver erraticum rhœas, sive sylvestre, *Park.* 367.
Red poppy. Corn rose. Cop rose. Corn poppy.

Corn-fields; annual; June and July.

Leaves hairy; *petals* dark scarlet, sometimes with a black spot at the base; *filaments* hairlike, attenuated.—Petals communicate a fine red colour to water or syrup: and are slightly narcotic.

b. *Capsule and calyx smooth; leaves simple.*

2. *Papaver somniferum.* *Sleepy poppy.*
Capsule globular, bald; *calyx* bald; *leaves* embracing the stem, cut, bald, glaucous.

Papaver sylvestre, *Raii Syn.* 308, 1; *Ger. em.* 370 (misprinted 400), 5.
Papaver somniferum, *Lin. S. P.* 726.
Papaver amplexicaule, *Stokes Bot. M. M.* 3, 181.
White poppy. Cheese bowls.

Neglected gardens; also cultivated; annual; July.

Stem 3 feet high; leaves simple, lobed; *petals* white, plain, streaked, marbled, or with a dark spot at the bottom; *stigma* 10 or 12-rayed; *seeds* white.—Capsules, in decoction, emollient; seeds oily, formerly used in emulsions, also strewed on cakes, yield an oil sold for that of the olive; juice of the capsule dried (English opium), as also the extract, and syrup of the dried capsules without the seeds, are in great use as narcotic, hypnotic, and stupefacient.

Fam. XVII. 83. NYMPHÆACEÆ. R. A. Salisbury.

Calyx 4 or 5-sepaled, inserted on the thalamus; *petals* and stamens disposed in many series alternate to the sepales; *stamens* many, indefinite; *anthers* adnate, 2-celled; *style* 0; *stigmata* 8 or 10, radiated; *ovary* (in natives) 1, free, many-celled; *pericarpium* dry, valveless; *seeds* ovate; perisperm farinaceous; corculum topshaped. — *Plants* herbaceous, aquatic; *stem* thick, creeping; *leaves* longly petioled, peltately ribbed; *peduncles* 1-flowered; *bracteæ* 0.

Sepales larger than the petals;
petals nectariferous; *filaments* linear ..... Nuphar. 453.
Sepales smaller than the petals;
stigma nectariferous; *inner filament*
dilated ..... Nymphæa. 454.

I. 453. NUPHAR. R. A. Salisbury. *Water-can.*

Calyx 4 or 5-sepaled; *petals* many, nectariferous on the back, inserted on the receptacle; *stamens* very numerous; *filaments* linear; *stigmata* 8 or 10, linear; *berry* ovate, barked, 8 or 10-celled.—*Flowers* yellow, exserted above the water.

1. *Nuphar luteum.* *Yellow water-can.*

Calyx 5-sepaled; *stigmata* not toothed; *petiole* 2-edged; *leaves* heartshape, lobes coming close together.

Nymphæa lutea, *Raii Syn.* 368, 1; *Ger. em.* 819, 2; *Lin. S. P.* 729.
Nymphæa major lutea, *Park.* 1252.
Nuphar luteum, *Salisbury, Ann. Bot.* 2, 69.
Yellow water lilly.

Rivers and stagnant waters; perennial; July.

Leaves blunt, smooth, edge not cut; *scape* round; *sepales* coloured; *petals* yellow, smelling like brandy, shorter than the sepales; *filaments* all linear; *fruit* ovate, beaked.—Roots poisonous to crickets and moles; the infusion useful in leprosy.

2. *Nuphar minimum.* *Smallest water-can.*

Calyx 5-sepaled; *stigmata* margined, toothed; *petiole* 2-edged; *leaves* heartshape, lobes rather distant.

Nymphæa lutea minima, *Willd. S. P.*
Nuphar minima, *Salisbury, Ann. Bot.* 2, 69.

Alpine lakes; perennial; July.

Plant small; *leaves* rather silky beneath; *flowers* golden yellow; *stigmata* edged with green.

II. 454. NYMPHÆA. Theophrastus. *Water-lilly.*

Calyx 4 or 5-sepaled, coloured; *petals* many, indefinite, on the ovary; *stamens* many; *filaments* outer row dilated, petal-like; *stigmata* many, radiated, cut, nectariferous; *berry* globular, 8-celled, many-seeded; bark hard.

Nymphæa alba. *White water-lilly.*

Leaves heartshape, smooth beneath, edge not cut; *petals* elliptical, oblong; *stigmata* 10, bent back; *trunk* horizontal.

Nymphæa alba, *Raii Syn.* 368, 3; *Ger. em.* 819, 1; *Lin. S. P.* 729.
Nymphæa alba major vulgaris, *Park.* 1251.
White water can. *Candock.* When double, *Water rose.*

Rivers and stagnant waters; perennial; June and July.

Leaf-lobes imbricate, roundish; *flowers* white, floating on the water; *sepales* 4, coloured above; *inner petals* smallest; *outer stamens* yellow, dilated; *fruit* blunt.—Root bulbous, dyes dark brown; is sometimes made into bread.

Fam. XIX. 84. BERBERIDEÆ. Jussieu.

Calyx deciduous, sepales in 2 series, 2 or 3 in each series; *petals* 4 or 6, opposite to the sepales; *stamens* as many as the petals opposite to them; *anthers* adnate, 2-celled, opening from the base to the tip by a valve; *ovary* 1, free; *style* 0; *pericarpium* 1-celled; *seeds* affixed to the base of the cells; perisperm fleshy; corculum straight, axile; radicle below.—*Plant* shrubby or herbaceous; *leaves* alternate, often compound; *flowers* racemose, bracteated.

Petals and *stam.* 6; *berry* 1-celled .... BERBERIS. 455.
Petals and *stam.* 4; *pericarp* 1-celled; 2-valved ..... EPIMEDIUM. 456.

I. 455. BERBERIS. Brunsfel. *Barberry.*

Outer sepales 3, inner 6; *petals* 6, glands 2, at the base of the petals; *stamens* irritable; *stigma* broad, sessile, umbilicated, persisting; *berry* ovate, cylindrical, 1-celled, 2 or 3-seeded.—*Shrub* thorny; *leaves* simple.

Berberis vulgaris. *Common barberry.*

Racemes simple, pendulous; *leaves* reverse ovate, fringed, toothed.

Berberis dumetorum, *Raii Syn.* 465.
Spina acida sive Oxyacantha, *Ger. em.* 1325, 1.
Berberis, *Park.* 1559.
Berberis vulgaris, *Lin. S. P.* 471.
Barberry bush. Pipperidge tree.

Woods and hedges; shrubby; May and June.

Branches angular, bald; *leaves* in bundles, petioled; *spines* 3 together; *racemes* solitary, many-flowered; *flowers* yellow; *berry* scarlet.—Root dyes wool and leather yellow; bark renders wine purgative; inner bark with alum dyes linen yellow; leaves acid, eaten as sauce; flowers offensive to the smell when too near; berries acid, not eaten by birds, boiled with sugar form a pleasant confection. Is supposed by some to cause wheat growing near it to become mildewed; but this is denied by others.

II. 456. EPIMEDIUM. Dioscorides. *Barrenwort.*

Outer sepales 2, inner 4; *sepales* spreading; *petals* 4; *nectariferous scale* 1, petal-like, cupshape, coloured, at the inner base of each petal; *stamens* 4; *style* lateral, from the top of the ovary; *stigma* simple; *pericarpium* oblong, 1-celled, 2-valved, many-seeded.

Epimedium alpinum. *Alpine barrenwort.*

Epimedium, *Ger. em.* 480.
Epimedium alpinum, *Lin. S. P.* 171.

Shady alpine situations; perennial; May.

Rhizoma horizontal; *leaves* upright, solitary, irregularly ternately compounded, flower-bearing; leaflets petioled, heartshaped, drooping, pointed, light green, glaucous beneath; *panicle* from a kneejoint towards the middle of the main petiole, upright, slightly racemose; *flowers* drooping; *petals* dark red; *nectaries* yellow.

Fam. XX. 85. RANUNCULACEÆ. Jussieu.

Calyx 3 to 6 sepales, free; *petals* 5 to 10, hypogynous; *stamens* 5 or many and indefinite, hypogynous; *anthers* adnate, 2-celled, mostly fastened on the outside of the filaments; *ovaries* many, indefinite, inserted on the receptacle, 1-styled; *pericarpia* 1-seeded, not opening, (cariopsides), or many-seeded, opening by longitudinal sutures, (camares;) *perisperm* horny; corculum much swollen, at the tip or

base of the perisperm.—*Plants* herbaceous or shrubby; *leaves* alternate, lobed, dilated at bottom, slightly sheathing; *stipules* 0.

A. *Anthers opening towards the centre of the flower.*

Sepales 4, deciduous; *petals* 4;
berry 1-celled, many-seeded ..... ACTÆA. 457.
Sepales 5, persisting; *petals* 5;
camares many-seeded ..... PÆONIA. 458.

B. *Anthers opening outwardly; camares many, many-seeded.*

Petals 4, 2 upper spurred; *sepales* irregular,
petaloid; upper forming a spur ..... CONSOLIDA. 459.
Petals 5, tailed; *sepales* 5, regular,
petaloid, deciduous ..... AQUILEGIA. 460.
Pet. 8 or 10, 2-lipped; *sepales* 5, regular,
coriaceous, persisting; *camares* sessile HELLEBORUS. 461.
Pet. 5 to 10, 2-lipped; *sepales* 5 to 10, regular,
petaloid; *camares* sessile ..... TROLLIUS. 462.
Petals 0; *sepales* regular, petaloid,
camares sessile ..... CALTHA. 463.

C. *Anthers opening outwardly; cariopsides many, on the receptacle.*

Petals 9, base scaled; *sepales* 3,
base not produced; *cariopsides* blunt ..... FICARIA. 464.
Petals 5, base scaled; *sepales* 5,
base not produced; *cariopsides* smooth RANUNCULUS. 465.
Petals 5, base pitted; *sepales* 5,
base not produced; *cariopsides* wrinkled BATRACHIUM. 466.
Petals 5, base nectariferous; *sepales* 5,
base produced ..... MYOSURUS. 467.
Pet. 5 to 10, base naked; *sepales* 5;
involucrum 0; *style* straight, pointed, ... ADONIS. 468.
Pet. 0; *sepales* 5 to 10; *involucrum*
3-leaved, distant; leaves cut; *cariopsides*
tailless ..... ANEMONANTHEA. 470.
Pet. 0; *sepales* 5; *involucrum* 3-leaved,
distant; leaves cut; *cariopsides* tailed... PULSATILLA. 471.
Pet. 0; *sepales* 4; *cariopsides* tailless,
sessile, longitudinally streaked..... THALICTRUM. 472.
Pet. 0; *sepales* 4; *cariopsides* tailled,
sessile, feathered..... CLEMATIS. 473.

A. RANUNCULACEÆ SPURIÆ. *Anthers* opening on the inner side.

I. 457. ACTÆA. Pliny. *Herb-Christopher.*

Calyx 4-sepaled; deciduous; *corolla* 4-petaled; *stamens* indefinite; *anthers* fastened inwardly; *ovary* 1, ovate; *stigma* capitate, sessile; *pericarpium* (berry) fleshy, not opening; *seeds* many, horizontal, in 2 series.—*Herb* perennial; *leaves* petioled, simple, lobed and variously cut; *flowers* racemose; *peduncle* bracteated; *sepales* and *petals* very deciduous.

Actea spicata. *Spiked herb-Christopher.*

Berry nearly globular; *petals* as long as the stamens; *racemes* ovate; *leaves* bi-ternately or tri-ternately cut; lobes ovate, lanceolate, serrated or slightly cut.

Christophoriana, *Raii Syn.* 262; *Ger. em.* 979.
Christophoriana vulgaris, *Park.* 379.
Actæa spicata, *Lin. S. P.* 722.
Christophoriana spicata, *Mœnch Meth.* 279.
Baneberries.

Alpine woods on limestone; perennial; May and June.

Root fibrous; *leaves* bald; *bracteæ* oblong; *flowers* racemose; *berries* black.—Root useful in nervous diseases; herb repellent; *berries* very active, poisonous.

II. 458. PÆONIA. Theophrastus. *Piony.*

Calyx 5-sepaled; sepales leaflike, unequal, orbicular, persistent; *petals* 5 to 10, orbicular, nearly equal, not clawed; *stamens* indefinite; *anthers* fastened outwardly; *ovaries* 2 to 5, girt by a fleshy disk; *stigmata* sessile, two-lamellar; *camares* 2 to 5, ovate, 1-celled, many-seeded; *seeds* shining, nearly globular; corculum basillary.—*Root* perennial; crown horizontal, thick; fibres fasciculate, thickened or tuberculated; *sheaths* scaly, at the bottom of the stem; *leaves* alternate, twice ternate; *flowers* terminal.

1. *Pœonia corallina.* *Coral piony.*

Stem herbaceous; *camares* woolly, bent back from the bottom; *leaves* 2-ternate; *lobes* ovate, not cut, bald.

Pæonia mas, *Raii Syn.* Ind. pl. dub.; *Ger. em.* 980, 1; *Park.* 1381.
Pæonia officinalis mascula, *Lin. S. P.* 747 *β.*
Pæonia fœmina, *Miller Dict.*
Pæonia corallina, *Retz Observ.* 354.
Male piony. Male peionie.

Clefts of rocks; naturalized; perennial; May.

Root fasciculate; fibres thick, oblong, cylindrical; *stem* 3 feet high, purplish; *petals* sometimes 6, crimson, sometimes pale red and white; *ovaries* 5; *camares* spread; *seeds* globular, red.—Used indifferently with the P. officinalis, and preferred by some.

2. *Pæonia officinalis.* *Shop piony.*

Stem herbaceous; *camares* woolly, upright at the base, diverging at top; *leaves* 2-ternately-cut; lobes bald, oblong; middle lobe cut; side-lobes not cut.

Pæonia fœmina, *Raii Syn.* Ind. pl. dub.; *Ger. em.* 981, 2; *Park.* 1380.
Pæonia officinalis fœmina, *Lin. S. P.* 747 α.
Pæonia mascula, *Miller Dict.*
Pæonia officinalis, *Retz Observ.* 35.
Pæonia nemoralis, *Salisbury Prod.* 375.
Female piony. Female peionie.

Woods, naturalized; perennial; May.

Stem greenish.—Root made into necklaces, used against the epilepsy in children, also given inwardly to adults; seeds used in the nightmare; syrup of the flowers anti-epileptic.

B. Helleboreæ. *Calyx* petaloid; æstivation imbricate; *petals* 5, 10, irregular, 2-lipped, nectariferous; or 0; æstivation imbricate; *anthers* opening on the outside; *camares* dehiscent, many-seeded; *seeds* horizontal. — *Stem* herbaceous; *leaves* alternate.

III. 459. CONSOLIDA. Brunsfel. *Larks-spur.*

Calyx coloured, deciduous, 5-sepaled; upper sepale spurred; *petals* 4, sometimes soldered; 2 upper petals forming an inner spur; *stamens* many; *ovary* 1; *camares* distinct; *seeds* many, dry-berrylike.—*Roots* annual; *stem* upright, branchy; *flowers* racemose; *bracteæ* 3 to each pedicell.

Consolida regalis. *Royal larks-spur.*

Stem upright, bald, divaricately branched; *flowers* few, in loose racemes; *pedicells* longer than the bractea; *capsules* bald.

Delphinium segetum, flore cæruleo, *Dillen in Raii Syn.* 273.
Consolida regalis sylvestris, *Ger. em.* 1083, 5.
Delphinium Consolida, *Lin. S. P.* 748.
Delphinium segetum, *Lamarck Fl. Fr.* 325.
Delphinium versicolor, *Salisbury Prod.* 375.
Field larks-spur. Larks-heel. Larks-claw.

Sandy fields; annual; June and July.

Stem herbaceous, bald or downy; *stem* branched; *flowers* of various colours.—Seeds acrid.

IV. 460. AQUILEGIA. Tragus. *Columbine.*

Calyx 5-sepaled, deciduous, sepales coloured, petal-like; *petals* 5, gaping above, 2-lipped; outer lip large, flat; inner very small; produced behind into spurs exserted between the sepales; *stamens* many, in 5 to 10 series; interior filaments membranaceous, oblong, without anthers; *ovaries* 5; *camares* 5, upright, many-seeded.—*Root* perennial; *stem* herbaceous, upright; *lower leaves* longly petioled; petioles 3-cut, biternate; lobes 3-fid, toothed, blunt; upper leaves lobed, lobes linear; *flowers* terminal, variously coloured.

Aquilegia vulgaris. *Common columbine.*

Spurs bent inwards; *capsules* villous; *stem* rather bald, leafy, many-flowered; *leaves* nearly bald; *styles* not longer than the stamens.

Aquilegia flore simplici, *Raii Syn.* 273.
Aquilegia cærulea, and A. rubra, *Ger. em.* 1093, 1, and 2.
Aquilegia vulgaris simplex, *Park.* 1367.
Aquilegia vulgaris, *Lin. S. P.* 752.

Fields and copses; perennial; July.

Herb mostly bald, rarely downy; leaf-lobes mostly cut; *flowers* panicled, drooping, pale.

V. 461. HELLEBORUS. Dioscorides. *Hellebore.*

Calyx persisting, 5-sepaled; sepales large, roundish, obtuse, mostly green; *petals* 8 or 10, very short, tubular; below slender, nectariferous; *stamens* 30 to 60; *ovaries* 3 to 10; *stigmata* terminal, orbicular; *camares* coriaceous; *seeds* in 2 rows, elliptic, umbilicated.—*Plants* herbaceous, perennial, hard, coriaceous, bald, sometimes slightly downy under the leaves; *root-leaves* petioled, palmately or pedately cut; lobes oblong, toothed: stem-leaves various, oftenest 0.

a. *Stem few-flowered, mostly forked; floral leaves sessile, cut.*

1. *Helleborus viridis.* *Green hellebore.*

Root-leaves quite bald, pedately cut; stem-leaves nearly sessile, palmately parted; *peduncles* often 2-cut; *sepales* roundish, ovate, green.

Helleborus niger hortensis flore viridi, *Raii Syn.* 271, 1.
Helleborastrum, *Ger. em.* 976, 2.
Helleboraster minor, flore viridante, *Park.* 212.
Helleborus viridis, *Lin. S. P.* 784.
Wild black hellebore. Bears foot.

Woods and pastures on chalk; perenn.; March to May.

Roots fleshy; fibres long; *herb* quite bald; *stem* forked at top; leaves shining; *root-leaves* growing longer than the stem after flowering; lobes oblong, lanceolate, acutely serrated, outer lobes often 2 or 3-cut; stem-leaves 3 or 5-parted; *flowers* green, slightly drooping.—Leaves infused in beer used as a prophylactic in epidemic fevers, are violently purgative, and vermifuge.

b. *Stem many-flowered, leafy; peduncles bracteated.*

2. *Helleborus fœtidus.* *Stinking hellebore.*

Stem many-flowered, leafy; *leaves* pedately cut, quite bald; lobes oblong, linear.

Helleboraster maximus, *Raii Syn.* 271, 2; *Ger. em.* 976, 3.
Helleboraster maximus seu Consiligo, *Park.* 212.
Helleborus fœtidus, *Lin. S. P.* 784.
Great ox heel. Bearsfoot setterwort.

Chalky shady places; perennial; March and April.

Stem panicled; *leaves* blackish green; *bracteæ* ovate, not cut, tip deeply toothed, pale yellowish green; *flowers* drooping; *sepales* erect, connivent, green with a purple edge, persistent; *camares* 3 or 4.—Root purgative; root or stem used as a seton by the ferriers.

VI. 462. TROLLIUS. Linnæus. *Globe-flower.*

Calyx coloured, 5, 10, or 15-sepaled; sepales deciduous, petal-like; *petals* 5 to 20, small, tubular at bottom, 1-lipped; *stamens* and *ovaries* many; *camares* many, sessile, nearly cylindrical, many-seeded.—Plant herbaceous, bald, upright, perennial; root fibrous; fibres black, in bundles; leaves petioled, palmately many-cut; flowers terminal, yellow.

Trollius Europæus. *European globe-flower.*

Sepales 15, connivent, forming a ball; *petals* 5 or 10, as long as the stamens.

Ranunculus globosus, *Raii Syn.* 272; *Ger. em.* 955, 12; *Park. Par.* 218.
Trollius Europæus, *Lin. S. P.* 782.
Trollius altissimus, *Crantz Austr.* 2, 123.
Trollius globosus, *Lamark Fl. Fr.* 3, 323.
Trollius connivens, *Mœnch Meth.* 313.
Trollius montanus, *Salisbury Prod.* 373.
Trollius sphæricus, *Salisb. Tr. Soc. Lin.* 8, 302.
Globe crowfoot. Locker gowlands.

Alpine pastures; perennial; May to July.

Stem 2 feet high, many-flowered; *flowers* first pale, then golden yellow; *sepales* 10 to 15.

VII. 463. CALTHA. Pliny. *Bootes.*

Calyx coloured, 5-sepaled; sepales nearly orbicular, petal-like; *petals* 0; *stamens* many; *ovaries* 5 to 10; *camares* 5 to 10, compressed, spreading, 1-celled, many-seeded.—*Herbs* perennial, quite bald; *roots* fibrous; *stems* cylindrical; *leaves* petioled, heartshape, ears not bent in; *flowers* terminal, yellow.

1. *Caltha palustris.* *Marsh bootes.*

Stem upright, many-flowered; *leaves* heartshape, nearly round, crenated; ears rounded.

Populago, *Raii Syn.* 272.
Caltha palustris major, *Ger. em.* 817, 1.
Caltha palustris vulgaris simplex, *Park.* 1213.
Caltha palustris, *Lin. S. P.* 784.
Populago palustris, *Scop. Carn.* 698.
Marsh marygold. Meadow bouts.

Moist places and river-sides; perennial; May and June.

Stems 18 in. high, forked, upright; *peduncles* furrowed; *upper leaves* nearly sessile; *petiole-ears* membranaceous, rounded, stipule-like; *flowers* large.—Herb in flower supposed to make the butter yellow, but is poisonous to cows; unexpanded flowers pickled and used for capers.

2. *Caltha minor.* *Small bootes.*

Stem ascending, 1-flowered; *leaves* heartshape, nearly orbicular, crenated; *ears* rounded.

Populago minor, *Tabernæm. Ic.* 750.
Caltha palustris minor, *De Candolle Syst. Nat.* 309, 4 β.

Moist places by side of rivers; perennial; May.

Stem simple; *leaves*, *ears*, and *flowers*, half the size of the former.

3. *Caltha radicans.* *Rooting bootes.*

Stem creeping, few-flowered; *leaves* triangular, heartshape, serrate, crenated.

Caltha radicans, *Forster Tr. Lin. Soc.* 8, 321.

Sides of lakes; perennial; May and June.

Stem rooting at bottom, ascending at tip, few-flowered; *leaves* nearly triangular, with a dilated sinus, lower angles obtuse; upper angle acute; teeth sharp; *sepales* oblong.

C. RANUNCULEÆ. *Æstivation* of the calyx and corolla imbricate; *petals* 5 to 15, with a scale at the inside of the claw, sometimes 2-lipped, lips very unequal; *anthers* ovate, opening outwardly; *cariopsides* many, mucronate; *seeds* erect.—*Stems* herbaceous; *leaves* radical or alternate; *involucrum* 0; *flowers* terminal, yellow.

VIII. 464. FICARIA. Brunsfel. *Pilewort.*

Calyx 3-sepaled, deciduous; *petals* 9, pitted at the bottom on the inside; *stamens* and *ovaries* many, indefinite; *cariopsides* smooth, compressed, blunt.—*Herb* bald, perennial; *roots* grumous; tubers reverse ovate, blunt; *stem* branched, spreading; *leaves* petioled, heartshaped, rather angular; *peduncles* 1-flowered, axillary, and terminal; *sepales* sometimes 5; *petals* 8 or 12.

Ficaria ranunculoides. *Runnunculuslike pilewort.*

Root grumous; *stem* leafy; *leaves* heartshape.

Chelidonium minus, *Raii Syn.* 246; *Ger. em.* 816; *Park.* 617.
Ranunculus Ficaria, *Lin. S. P.* 774.
Ficaria ranunculoides, *Mœnch. Meth.* 215.
Ficaria verna, *Hudson Fl. Angl.* 244.
Ranunculus præcox, *Salisb. Prod.* 372.
Ficaria communis, *Dumeril Cours* 4, 445.
Little celandine. Figwort. Pilewort.

Damp fields and pastures; perennial; March to May.

Stem long; *leaves* longly petioled, shining; *flowers* yellow shining, becoming whitish at the tip; varies with the *stem* long or short; *leaves* entire or angled, heart or kidneyshape, with or without a black spot; *axillæ* naked or bulb-bearing; *calyx* 3 to 5-sepaled; *petals* 8 to 12.—Herb mild, esculent as a potherb; juice of the roots used as a lotion for the piles.

IX. 465. RANUNCULUS. Pliny. *Crowfoot.*

Calyx 5-sepaled; sepales deciduous without separating at bottom; *petals* 5 or 10, with a nectariferous scale or pit at the base; *stamens* and *ovaries* many, indefinite; *cariopsides* ovate, slighly compressed, smooth, or prickly, not streaked; ending in a short horn; disposed.—*Stem* cylindrical; *peduncles* terminal or axillary; *flowers* white or yellow.

a. Ranunculus. *Flowers yellow; leaves bald, many-cut, toothed; roots fibrous, annual; cariopsides tubercular or spinous on both sides.*

1. *Ranunculus parviflorus.* *Smallflowered crowfoot.*

Leaves villous, round, 3-lobed, large-toothed or cut; *stem* lying down, soft haired; *peduncles* opposite to the leaves; *calyx* equal to the petals, becoming reflected; *cariopsides* granularly tuberculated.

Ranunculus hirsutus annuus flore minimo, *Raii Syn.* 248, 5.
Ranunculus parviflorus, *Lin. S. P.* 780.
Ranunculus muricatus, *Mœnch. Meth.* 215.
Hairy crowfoot.

Fields and hedges on gravel; annual; May and June.

Stem branched, leafy; *leaves* longly petioled, uppermost leaves lanceolate, not in the least cut; *flowers* very small; *petals* yellow, oblong, sometimes 3 or 4, not longer than the calyx; *cariopsides* 7 to 10, compressed, almost orbicular, crowned with a very short, nearly straight style.

2. *Ranunculus arvensis.* *Corn crowfoot.*

Leaves bald; seed-leaves toothed at the tip; root-leaves 3-parted; stem-leaves many-cut, lobes linear; *stem* upright, many-flowered; *cariopsides* with long prickles on each side.

Ranunculus arvorum, *Raii Syn.* 248; *Ger. em.* 951, 3; *Park.* 328.
Ranunculus arvensis, *Lin. S. P.* 780.
Ranunculus echinatus, *Crantz Austr.* 2, 118, not of Ventenat.

Cornfields; annual; June.

Stem much branched; *leaves* rather bold; lobes oblong; edge not cut, tip sharply cut; *flowers* small; *stamens* 12 or 14; *cariopsides* 6 or 7, large.—*Herb* acrid, poisonous to sheep, 3 ounces of the juice killed a dog in 4 minutes.

3. *Ranunculus hirsutus.* *Rough-haired crowfoot.*

Leaves 3-lobed or 3-cut, lobes blunt, deeply toothed, the middle peduncled; *calyx* turned back; *stem* not bulbous at bottom; *cariopsides* with a single row of very small tubercles round the edge.

Ranunculus rectus pallidioribus foliis, *Raii Syn.* 247, 3.
Ranunculus bulbosus β, *Hudson Fl. Angl.* 241.
Ranunculus philonotis, *Retz Obs.* 6, 31.
Ranunculus agrarius, *All. Auct.* 27.
Ranunculus sardous, *Crantz Austr.* 2, 84.
Ranunculus pallidior, *Villars Delph.* 4, 751.
Ranunculus hirsutus, *Aiton Hort. Kew.* 2, 268.
Ranunculus pallidus, *Russel in Schrader Jour. Bot.* 1, 425.
Ranunculus Palensis, *Berg. Fl. Bass. Pyr.* 2, 405.

Walls and waysides: annual; June to August.

Stem 18 in. high, branchy, many-flowered, upright or trailing; hairs spreading; sometimes bald; *leaves* 3-parted, hirsute, pale.

β. *intermedius.* *Leaves* nearly bald.

Ranunculus intermedius, *Poiret Dict.* 6, 116.
Ranunculus pumilus, *Thuill. Par.* 1, 277, not of Poiret.

Damp shady places.

γ. *parvulus.* *Stem* dwarf, mostly 1-flowered.

Ranunculus parvulus, *Lin. Mant.* 79.
Ranunculus parviflorus, *Gouan Fl. Monsp.* 270, not of Linn.

Dry stony places.

b. Leiosperma. *Flowers yellow; leaves lobed or many-cut; root fibrous; cariopsides smooth.*

4. *Ranunculus bulbosus.* *Bulbous crowfoot.*

Root-leaves petioled, 3-cut, slightly pinnately cut; lobes 3-cut, deeply toothed, the middle lobe slightly petioled; *stem* upright, bulbous at the neck; *calyx* turned back.

Ranunculus bulbosus, *Raii Syn.* 247, 2; *Ger. em.* 953, 6; *Park.* 329; *Lin. S. P.* 778.
Ranunculus lætus, *Salisbury Prod.* 373.
Ranunculus flabellatus, *Bivona Sicul.* 68.
Butter cups. Gold cups. King cups. King kop. Gold knops.

Fields and meadows; perennial; May.

Root bulbous, solid, proliferous above; *stem* 1 foot high; *leaves* more or less hirsute, segments 3-cut or lobed.

β. *plenus.* *Flower* double.

Ranunculus maximus Anglicus, *Ger. em.* 957, 1.
St. Anthony's turnep. Rape crowfoot. Yellow bachelor's buttons.

5. *Ranunculus repens.* *Creeping crowfoot.*

Leaves pinnately 3-cut; segments wedgeshape, 3-lobed, deeply toothed; *stem* with creeping prostrate runners from the crown, the flower-bearing stem nearly upright; *calyx* close; *cariopsides* with a straight beak.

Ranunculus pratensis repens, *Raii Syn.* 247, 1; *Park.* 329.
Ranunculus pratensis, etiamque hortensis, *Ger. em.* 951, 1.
Ranunculs repens, *Lin. S. P.* 779.
Ranunculus prostratus, *Porr. Dict.* 6, 113.
Ranunculus infestus, *Salisbury Prod.* 373.
Common crowfoot. Butter-flower.

Damp fields; perennial; June to August.

Stems prostrate, middle stems sometimes upright or ascending; *leaves* with the middle segment always petioled,

side segments sometimes sessile; upper surface very smooth, dark green, spotted with black or white, sometimes downy, or spotless; segments 3-cut or 3-parted, sometimes many-cut; *flowers* often double or proliferous from the centre.

6. *Ranunculus acris.* *Acrid crowfoot.*

Leaves downy or nearly bald, palmately parted; lobes deeply toothed, acute; upper lobes linear; *stem* upright, many-flowered, slightly downy; *peduncles* cylindrical; *calyx* villous; *cariopsides* terminated by a nearly straight mucro.

Ranunculus pratensis erectus acris, *Raii Syn.* 248, 4.
Ranunculus surrectis cauliculis, *Ger. em.* 951, 2.
Ranunculus pratensis erectus acris vulgaris, *Park.* 329.
Ranunculus acris, *Lin. S. P.* 779.
Ranunculus napellifolius, var. *Crantz Austr.* 2, 90.
Upright meadow crowfoot.

Fields and pastures; perennial; May to July.

Stem 2 feet high, branched above; hairs pressed to the stem; *leaves* spotless, sometimes with a black spot in the middle; *flowers* often double.

7. *Ranunculus sceleratus.* *Wicked crowfoot.*

Leaves bald; root-leaves petioled, 3-parted; lobes 3-lobed, slightly and bluntly cut; uppermost leaves three-parted, lobes oblong, linear, not cut; *floral-leaves* oblong; *calyx* bald; *cariopsides* very small, forming an oblong spike.

Ranunculus palustris, *Raii Syn.* 249, 1.
Ranunculus palustris rotundi-folius, *Ger. em.* 962, 4.
Ranunculus palustris Sardonius lævis, *Park.* 1215.
Ranunculus sceleratus, *Lin. S. P.* 776.
Round-leaved water crowfoot. Celery-leaved crowfoot.

Watery places; annual; June to August.

Herb pale green; *stem* thick, juicy; *flowers* small; *petals* scarcely longer than the calyx; *stamens* 8 to 12; *cariopsides* very numerous, smooth, deciduous.—Herb corrosive, ulcerating the places to which it is applied.

β. *minimus.* *Stem* very short; *root-leaves* 3-cut; *fruit* ovate.

γ. *submersus.* *Leaves* all under water, translucid, membranaceous; lobes long.

8. *Ranunculus auricomus.* *Golden-haired crowfoot.*

Leaves bald; root-leaves petioled, heartshape, generally 3-parted or 3-lobed; stem-leaves parted into linear lobes, sometimes slightly toothed; *calyx* downy, shorter than the petals.

Ranunculus nemorosus dulcis, secundus Tragi, *Raii Syn.* 248; *Park.* 326.
Ranunculus auricomus, *Ger. em.* 954, 7; *Lin. S. P.* 775.
Ranunculus polymorphus, *Allioni Ped.* 1449.
Ranunculus mitis, *Gilibert in Ulst. Del.* 2, 420.
Ranunculus variifolius, *Salisb. Prod.* 1, 373.
Sweet wild crowfoot. Golden locks.

Damp fields and shady places; perennial; April to July.
Stem 2 feet high, branched; *sepales* coloured, edge sometimes dilated; *petals* sometimes 0.—Herb mild.

c. *Flowers yellow; leaves toothed, or not cut; root fibrous.*

9. *Ranunculus reptans.* *Creeping crowfoot.*
Leaves linear, not in the least cut, bald; *stem* creeping, emitting a root at each joint.

Ranunculus reptans, *Lin. S. P.* 773.
Ranunculus Flammula, *Smith Fl. Brit.* 587.

Sides of Alpine lakes; perennial; June to August.
Stem threadlike, creeping; *leaves* nearly threadlike; *flowers* solitary, small, yellow.

10. *Ranunculus flammeus.* *Flame crowfoot.*
Leaves bald, linear, lanceolate, slightly ovate, scarcely cut; lower leaves petioled; *stem* lying down, many, slightly rooting at bottom; *peduncles* opposite to the leaves; *cariopsides* smooth.

Ranunculus flammeus minor, *Raii Syn.* 250, 7; *Ger. em.* 961, 2.
Ranunculus flammeus minor, sive angustifolius, *Park.* 1214.
Ranunculus Flammula, *Lin. S. P.* 772.
Small spear wort. Bane wort.

Bogs and meadows; perennial; July to September.
Stem 2 feet high; *leaves* bald, slender; *flowers* rich, shining yellow.—Herb acrid, poisonous to sheep; the distilled water is emetic, acting instantly.

β. *serratus.* *Leaves* nearly lanceolate, serrated.
Ranunculus flammeus serratus, *Ger. em.* 962, 3.

γ. *ovatus.* *Leaves* mostly ovate, petioled.
Ranunculus Flammula, *Poiret Dict.* 6, 98.
Ranunculus ovatus, *Persoon Ench.* 2, 102.

11. *Ranunculus longifolius.* *Long-leaved crowfoot.*
Leaves lanceolate, slightly serrate, sessile, nearly embracing the stem; *stem* upright, bald.

Ranunculus flammeus major, *Raii Syn.* 250, 8; *Ger. em.* 961, 1.
Ranunculus palustris flammeus major, *Park.* 1215.
Ranunculus Lingua, *Lin. S. P.* 773.
Ranunculus longifolius, *Lamarck Fl. Fr.* 3, 189.
Great spear wort.

Ditches; perennial; July.

Stem, *leaves*, and *flowers*, larger than in R. flammeus; leaves not cut or serrulated; bald, or slightly hairy; hairs pressed to the leaves.

d. *Flowers yellow; leaves not in the least cut; roots bundled.*

12. *Ranunculus gramineus.* *Grassy crowfoot.*

Leaves lanceolate or linear, not cut; *stem* upright, quite bald, fibrous at the collar; *nectariferous-scale* tubular; *root* in bundles.

Ranunculus gramineus Lobelii, *Ger. em.* 954, 9, is double.
Ranunculus gramineus, *Lin. S. P.* 773.
Ranunculus graminifolius, *Salisb. Prod.* 372.

Fields; perennial; May and June.

Root tuberous, cylindrical, radiatedly fibrous at top; *leaves* very smooth, glaucous, rather stiff; *sepales* smooth, spread; *flowers* often double.

e. *Flowers white; leaves lobate, multifid, or toothed; cariopsides smooth.*

13. *Ranunculus alpestris.* *Alp crowfoot.*

Leaves orbicular, 3-lobed; lobes cut, crenate, rather blunt; *stem* mostly 1-flowered; *calyx* bald; *petals* 5, reverse heartshape, or 3-lobed.

Ranunculus montanus flore minore, *Ger. em.* 964, 3.
Ranunculus alpestris, *Lin. S. P.* 772.

Alps; perennial; May and June.

Leaves smooth, bald; root-leaves orbicular, round, 3-cut or parted; stem-leaves linear, or cut into 3 linear lobes; *scape* 4 inches high, 1-flowered; *petals* entirely white.

X. 466. BATRACHIUM. De Cand. *Water-crowfoot.*

Calyx 5-sepaled; sepales deciduous, not produced at bottom; *petals* 5 or 10, white, base yellow, with a nectariferous hole: *stamens* and *ovaries* many; *cariopsides* ovate, compressed, not armed, transversely wrinkled. — *Plants* aquatic; *roots* fibrous; *leaves* quite bald; those out of water toothed, slightly lobed; leaves in water capillary, many-cut; *peduncles* 1-flowered, opposite to the leaves.

1. *Batrachium hederaceum.* *Ivyleaved water-crowfoot.*

Stem creeping; *leaves* nearly kidneyshape, 3 or 5-lobed; lobes broad, not cut, very blunt; *petals* oblong, scarcely longer than the calyx; *stamens* 5 to 12; *cariopsides* bald.

Ranunculus aquatilis hederaceus albus, *Raii Syn.* 249, 2.
Ranunculus hederulæ folio aquaticus, *Park.* 1216.
Ranunculus hederaceus, *Lin. S. P.* 781.
Ranunculus hederæfolius, *Salisb. Prod.* 373.

Inundated places and springs; perennial; May to Aug.

Stems trailing or swimming, rooting, branched, divaricated; *leaves* longly petioled, rather fleshy, smooth; *flowers* small, white.

2. *Batrachium tripartitum.* *Three-parted water-crowfoot.*

Stem floating; *leaves* under water, many-cut, threadlike, out of water 3-parted; lobes wedgeshaped, toothed at the tip; *petals* oblong, rather sharp, as long as the calyx; *cariopsides* bald.

Ranunculus tripartitus, micranthus, *De Cand. Syst. Nat.* 1, 234.

Ditches and springs; perennial; May and June.

Flower and *cariopsides* similar to those of B. hederaceum; *stem, leaves,* and *habit,* similar to B. heterophyllum.

3. *Batrachium obtusiflorum.* *Blunt-petaled water-crowfoot.*

Stem floating; *leaves* under water many-cut, threadlike; out of water 3-parted, lobes wedgeshaped, toothed at the tip; *petals* reverse ovate, obtuse, longer than the calyx; *cariopsides* smooth.

Ranunculus tripartitus obtusiflorus, *De Cand. Syst. Nat.* 1, 234.
Ranunculus aquatilis 2, *With. Bot. Arr.* 3, 623.

Ditches and inundated places; perennial; May, June.

Leaves under water very few, sometimes 0.

4. *Batrachium heterophyllum.* *Odd-leaved water-crowfoot.*

Stem floating; *leaves* under water many-cut, threadlike; out of water 3-parted, lobes wedgeshaped, toothed at the tip; *petals* reverse ovate, larger than the calyx; *cariopsides* bristled; bristles stiff.

Ranunculus aquatilis, *Raii Syn.* 243, 9; *Ger. em.* 829, 2; *Lin. S. P.* 781.
Ranunculus aquaticus hepaticæ facie, *Park.* 1216.
Ranunculus capillaris, *Gat. Fl. Mont.* 102.
Ranunculus heterophyllus, *Hoffm. Germ.* 197.
Ranunculus diversifolius, *Schrank. Fl. Bav.* 103.
Water crowfoot.

Ditches and ponds; perennial; May and June.

Leaves above the water 3-parted, not peltate; stamens 12 to 24.—Herb troublesome in ponds; is not acrid, but will feed and even fatten cattle.

β. peltatum. *Leaves* above the water orbicular, 3-lobed, peltate.

Ranunculus peltatus, *Mœnch Meth.* 214.

5. *Batrachium pantothrix.* *Fine-trimmed water-crowfoot.*
Stem floating; *leaves* many-cut, hairlike, outline orbicular, segments divergent, thin; *petals* reverse ovate, larger than the calyx; *cariopsides* bald.

Ranunculus aquatilis omnino tenuifolius, *Raii Syn.* 249, 4.
Millefolium, sive Maratriphyllon, flore et semine ranunculi aquatici, hepaticæ facie, *Ger. em.* 827, 2.
Ranunculus trichophyllus, *Chaix in Vill. Dauph.* 1, 335.
Ranunculus divaricatus, *Mœnch Mœth.* 214.
Ranunculus capillaceus, *Thuil. Par. ed.* 2, 1, 278.
Ranunculus aquatilis A, *Desfont. Fl. Atl.* 1, 242.
Ranunculus pantothrix, *Brotero Fl. Lus.* 2, 375.
Ranunculus pectinatus, *Dubois Meth. Orl.* 454.
Ranunculus aquatilis β, *Smith Fl. Brit.* 596.

Ponds and ditches; perennial; May and June.
Herb mild; used for feeding cattle.

6. *Batrachium cæspitosum.* *Tufted water-crowfoot.*
Stem floating; *leaves* many-cut, hairlike, outline nearly orbicular, segments diverging, stiff; *petioles* slightly sheathing, eared; *petals* reverse ovate, larger than the calyx; *cariopsides* bald.

Ranunculus aquaticus albus, circinatis tenuissime divisis foliis, floribu ex alis longis pediculis innixis, *Raii Syn.* 249, 5.
Ranunculus rigidus, *Persoon in Hoff. Germ.* 4, 257.
Ranunculus cæspitosus, *Thuill. Par. ed.* 2. 1, 279.
Ranunculus aquaticus B, *Desfont. Fl. Atl.* 1, 443.
Ranunculus pumilus, *Poiret Dict.* 6, 133.
Ranunculus circinnatus, *Sibthorp Fl. Ox.* 175.
Ranunculus aquatilis γ, *Smith Fl. Brit.* 596.

Inundated places; perennial; May and June.
Herb mild.

7. *Batrachium fluviatile.* *River water-crowfoot*
Stem floating; *leaves* many-cut, hairlike; segments long, parallel; *petals* reverse ovate, larger than the calyx; *cariopsides* bald.

Ranunculus q. Millefolium maratriphyllum fluitans, ranunculo sive polyanthemo aquatili albo affine J. Bauhini, *Raii Syn.* 250, 6.
Ranunculus fluitans, *Fl. Dan.* 376.
Ranunculus peucedanifolius, *Allioni Ped.* 1469.
Ranunculus peucedanoides, *Desfont. Fl. Atl.* 1, 444.
Ranunculus fluviatilis, *Willdenow S. P.* 2, 1333.
Ranunculus aquatilis β, *Smith Fl. Brit.* 596.
Ranunculus panthothrix peucedanifolius, *De Cand. Syst. Nat.* 1, 236.

Rivers and running waters; perennial; May and June.

Segments of the leaves very long.—Herb mild, like the preceding.

XI. 467. MYOSURUS. Dodonæus. *Mouse-tail.*

Calyx 5-sepaled; sepales produced beyond the insertion; *petals* 5, claws threadshape, tubular; *stamens* 5 to 20; *ovaries* many; *cariopsides* many, 3-sided, pointed, with a straight style, very crowded, forming a very long spike.—*Plants* herbaceous; *root* fibrous, annual; *caudex* simple, upright, tufted; *leaves* linear, not cut; *scape* 1-flowered, as long as the leaves, thickened.

Myosurus Europæa. *European mouse-tail.*

Myosuros, *Raii Syn.* 251.
Cauda muris, *Ger. em.* 426, 4.
Holosteum Loniceri, Cauda muris vocatum, *Park* 500.
Myosurus minimus, *Lin. S. P.* 407.

Gravelly fields; annual; May.

Scapes 3 to 6 from the same root; *leaves* sometimes slightly hairy; *flowers* pale yellow; *petals* rarely anther-like.

D. ANEMONEÆ. *Æstivation* of the calyx and corolla imbricate; *petals* flat, or 0; *cariopsides* often tailed.—*Plants* herbaceous; *roots* grumose or bundled; *leaves* radical or alternate.

XII. 468. ADONIS. Matthioli. *Maithes.*

Calyx 5-sepaled, closed together; sepales sometimes enlarged at the bottom; *petals* 5 to 15, claw naked; *stamens* many, inserted at the bottom of the gynophore; *ovaries* many; *cariopsides* many, aggregated in an ovate or cylindrical spike, 1-seeded, bald, terminated by a straight, conical style.—*Plants* herbaceous, caulescent; *root* annual, fusiform; *stem-leaves* pinnatedly parted; lobes many-cut; segments linear; *involucrum* 0; *flowers* small, red or yellow.

1. *Adonis autumnalis.* *Autumn maithes.*

Calyx bald; *petals* concave, connivent, scarcely larger than the calyx; *cariopsides* nearly reticulately collected into an ovate head; *stem* branched.

Flos Adonis, *Raii Syn.* 251, *Park. Par.* 293.
Flos Adonis flore rubro, *Ger. em.* 387, 1.
Adonis autumnalis, *Lin. S. P.* 771.
Adonis flower. Red maithes. Red camomile. Rose-a-ruby. Red morocco.

Corn-fields; annual; May and October.

Flowers blood-red.

2. *Adonis æstivalis.* *Summer maithes.*

Calyx hispid at bottom; *petals* flat, oblong, obtuse, twice as long as the calyx; *cariopsides* reticulately disposed in a long loose spike; *stem* scarcely branched.

Adonis æstivalis, *Lin. S. P.* 772.
Adonis miniata, *Jacquin Austr.* 354.

Corn-fields; annual; May to October.

Calyx long; *flowers* peduncled, small, dark red; *petals* oblong, blunt; *cariopsides* distant on the spike.

XIII. 469. ANEMONANTHÆA. De Cand. *Anemone.*

Involucrum 3-leaved, distant from the flower; *calyx* 5 to 15-sepaled; *sepales* petal-like; *petals* 0; *stamens* many, indefinite; *cariopsides* many, ovate, with a hooked more or less hirsute style.—*Plants* stemless; *leaves* radical; *peduncles* solitary or in pairs, leafless, 1-flowered.

a. *Involucrum-leaflets petioled; rhizoma ovate, tuberose; sepales* 10 *to* 15.

1. *Anemonanthea Apennina.* *Apennine anemone.*

Leaves 3-ternately-cut; segments lanceolate, deeply toothed, teeth acute; *petiole* branched; *involucral leaflets* petioled, 3-cut, deeply toothed; *sepales* 12 or 14, oblong, blunt.

Anemone q. Ranunculus nemorosus, flore purpureo cæruleo Parkinson (325), *Dillen in Raii Syn.* 259, 2.
Anemone geranifolia, *Ger. em.* 377, 8.
Anemone Apennina, *Lin. S. P.* 762.
Geranium-leaved anemone. Stork's-bill wind-flower.

Woods; perennial; April.

Root black; *leaves* longly petioled; *scape* bald; *involucrum* like the leaves; *pedicells* villous; *flowers* upright, light blue; *sepales* 4 times as long as the stamens.

b. *Involucrum-leaflets petioled; rhizoma cylindrical, long; sepales 5 or 6.*

2. *Anemonanthea nemorosa.* *Wood anemone.*

Leaves ternately cut; segments 3-cut, deeply toothed, lanceolate, sharp; *involucral leaflets* petiolets, similar to the leaves; *sepales* 6, elliptic.

Anemone nemorum alba, *Raii Syn.* 259, 1; *Ger. em.* 383, 2.
Ranunculus nemorosus albus simplex, *Park.* 325.
Anemone nemorosa, *Lin. S. P.* 762.
Anemone nemorosa alba, *Crantz Austr.* 2, 101.
White wind-flower.

Woods and shady places; perennial; April.

Petals white, rose-red, lilac, or purple; *leaves* sometimes dotted yellow beneath.—Plant acrid, inducing the dysentery; but is useful in head-ach, intermittent fevers, and rheumatic gout.

3. *Anemonanthea ranunculoides.* *Ranunculuslike anemone.*

Root-leaves 3 to 5-cut; segments slightly 3-cut, deeply toothed; *involucral leaflets* slightly petioled, 3-parted, deeply toothed; *sepales* 5 or 6, elliptic.

Anemone lutea, *Ger. em.* 383, 1.
Anemone ranunculoides, *Lin. S. P.* 762.
Anemone nemorosa lutea, *Crantz Austr.* 2, 101.
Anemone lutea, *Lamarck Fl. Fr.* 3, 318.
Yellow wind-flower. Yellow anemone.

Hilly fields and woods; perennial; April and May.

Leaves few, bald; *pedicells* hairy; *flowers* gold-yellow, solitary or in pairs, one sometimes male.

XIV. 470. PULSATILLA. Gesner. *Pasque-flower.*

Involucrum 3-leaved, distant from the flower; *leaves* sessile, palmately parted, lobes linear; *sepales* 5 or 6; *glands* (abortive stamens?) pedicelled, between the sepales and stamens; *petals* 0; *stamens* many; *cariopsides* many, tailed; tails long, bearded.—*Root-leaves* finely divided; *flowers* purple.

Pulsatilla vulgaris. *Common pasque-flower.*

Leaves pinnately cut; segments many-cut; lobes linear; *flowers* slightly nodding; *sepales* 6, spreading.

Pulsatilla flore crassiore et majore flore, *Raii Syn.* 260.
Pulsatilla vulgaris, *Ger. em.* 385, 1; *Park.* 341; *Lin. S. P.* 759.
Anemone pratensis, *Sibthorp Fl. Ox.* 169, not of Linnæus.
Anemone Pulsatilla α, *Lamarck Fl. Fr.* 3, 320.
Anemone collina, *Salisbury Prodr.* 371.
Pasque-flower, i. e. Easter-flower. *Passe flower. Pulsatilla. Flaw-flower. Coventry bells. Hill-tulip*, Cambridge. *Bastard anemone.*

Hilly pastures on chalk; perennial; April and May.
Color very variable; often double.—Plant acrid.

XV. 471. THALICTRUM. Dioscorides. *Meadow-rue.*

Flowers dioicous, polygamous, often hermaphrodite; *calyx* 4 or 5-sepaled; sepales ovate, petaloid, soon falling off; *stamens* many; *ovaries* 4 to 15; *styles* short; *cariopsides* sessile, ovate, streaked lengthways.—*Plants* perennial; *roots* yellowish, fibrous; *stems* annual, fistulous; *leaves* many-cut; *stipules* 0; *flowers* panicled, yellowish.

1. *Thalictrum alpinum.* *Alpine meadow-rue.*

Stem not in the least branched, nearly naked, a finger's height; *racemes* simple, terminal; *flowers* nodding; *leaf-segments* bald.

Thalictrum minimum montanum atro-rubens, foliis splendentibus, *Raii Syn.* 204, 4.
Thalictrum Alpinum, *Lin. S. P.* 767.

Alpine turf-bogs; perennial; June.

Root creeping; *stem* bald; *leaves* 5 or 6, radical, pinnately cut; lobes sessile, 3 or 5-toothed; above shining, beneath pale; *flowers* 7 or 8; pedicells short, rather distant; *stamens* 12; *ovaries* few.

2. *Thalictrum minus.* *Small meadow-rue.*

Stem cylindrical, covered with glaucous pollen; *flowers* loosely panicled, nodding, 4-sepaled; *leaf-segments* bald, roundish, toothed at the tip, glaucous beneath; *cariopsides* sharp at both ends.

Thalictrum minus, *Raii Syn.* 203, 2; *Ger. em.* 1251, 2; *Park.* 264; *Lin. S. P.* 769.
Small bastard rhubarb. Fen rue.

Mountainous pastures on chalk; perennial; June, July.

Stem 1 foot high; *leaves* spreading; segments ovate, nearly round, 3 or 5-toothed at the tip; *panicle* naked, stiff, very open; *cariopsides* 3 to 6.

β. *latifolium.* *Leaflets* broad.

Thalictrum montanum minus, foliis latioribus, *Raii Syn.* 204.

3. *Thalictrum majus.* *Great meadow-rue.*

Stem cylindrical, without glaucous pollen; *flowers* loosely panicled, drooping; *leaf-segments* bald, glaucous beneath, 3-cut; lobes ovate, slightly mucronate; *cariopsides* obliquely rounded.

Thalictrum sive Thalictrum majus, *Ger. em.* 1251, 1.
Thalictrum majus vulgare, *Park.* 263.
Thalictrum majus, *Murray Syst. Veg.* 513.
Great bastard rhubarb. English rhubarb.

Shady mountainous places; perennial; June and July.

Stem 3 feet high; *leaves* dark green; *petioles* diverging, spreading; *panicle* much bent; *sepales* greenish purple; *cariopsides* large, bellied on one side, obliquely rounded at bottom.—Root used as rhubarb.

4. *Thalictrum nigricans.* *Blackish meadow-rue.*

Stem stiff, branched, furrowed; *root* fibrous; *panicle* manifold, upright, nearly corymbous; *radical-leaf-segments* wedge-shaped, 3-cut; stem-leaf-segments oblong, linear.

Thalictrum nigricans, *Jacquin Austr.* 5, 421.
Thalictrum rugosum, *Poiret Dict.* 5, 317.
Thalictrum flavum 2, *Lightfoot Fl. Scot.*

Edges of fields and rivers; perennial; July.

Lobes of the leaves neither all wedgeshape, nor all linear.

5. *Thalictrum flavum.* *Yellow meadow-rue.*

Stem upright, branched, furrowed; *root* fibrous; *panicle* manifold, upright, nearly corymbous; *leaf-segments* wedge-shape, 3-cut, acute.

Thalictrum seu Thalictrum majus, *Raii Syn.* 203, 1; not of Gerarde.
Thalictrum flavum α, *Lin. S. P.* 770.
Thalictrum flavum, *Miller Dict.*

Damp fields and sides of rivers; perennial; July.

Stem 3 feet high; *panicle* slightly leafed; *flowers* upright; *sepales* 4; *stamens* 24; *ovaries* 8 to 10; *stigmata* thick, heartshape, white.—Root astringent yet purgative.

E. CLEMATIDEÆ. *Æstivation* of the calyx valvate, or induplicate; *petals* flat, or 0; *anthers* linear, fastened outside the filaments; *cariopsides* tailed; tails feathered: *seeds* pendulous.—*Plants* climbing, shrubby; *leaves* opposite.

XVI. 472. CLEMATIS. Dioscorides. *Travellers-joy.*

Involucrum under the flower 0; *sepales* 4 to 8; *æstivation* valvate, or induplicate; *petals* 0; *cariopsides* many, ending in a long feathered beard; *cotyledons* distant.

Clematis dumosa. *Bush travellers-joy.*

Stem climbing; *leaves* pinnately cut; segments ovate, lanceolate, deeply toothed, acuminated; truncated heartshape at the base; *peduncles* rather shorter than the leaf.

Clematis latifolia, seu Atragene quibusdam, *Raii Syn.* 258.
Viorna, *Ger. em.* 886, 1.
Clematis sylvestris latifolia, sive Viorna, *Park.* 380.
Clematis Vitalba, *Lin. S. P.* 766.
Clematis sepium, *Lamark Fl. Fr.* 3, 306.
Clematis dumosa, *Salisb. Prod.* 371.
Traveller's joy.

Hedges; shrubby; July.

Stem contorted; *leaves* rather bald; *panicle* axillary, forked, leafy; *flowers* white, odoriferous.—Herb in infusion used in dropsy: is diuretic, astringent, and even corrosive.

ADDITIONS AND CORRECTIONS.

Page 10 & 11. Remove athyrium regium, and A. dentatum, into the genus cyclopteris, changing the gender of the adjectives.

P. 35. Potamogiton perfoliation, *Lin. S. P.* 182.
Peltopis perfoliata, *Rafinesque in Journ. de Phys.* 1819.

P. 38. Fam. II.* 7.* LEMNADEÆ. *Miscellanearum sectio*, Linnæus. *Naiadum pars*, Jussieu. *Hydrocharidum pars*, Jussieu. *Hydrocharidibus affines*, Brown.

Flowers spathaceous, on a spadix, anthers and pistills separate. *Spadix* 2-flowered; *spathæ* hoodliked, 1-leafed; *perigonium* 0; *stamens* 2 or more; anthers turned outwards; *ovarium* free, solitary, 1 or many-seeded; ovules upright; style 0; stigma 1; *pericarp* not opening, utricular or capsular; corculum axile; perisperm fleshy; radicle below.—*Plants* herbaceous, floating, stemless; *roots* from the lower surface of the leaves, ending in a conical appendage; *leaves* simple or rosaceous, proliferous from the margin, sheathing at the base; *flowers* lateral, in a marginal slit.

28.* LEMNA. Theophrastus. *Duck-meat.*

Spathe pitchershape, membranaceous, 2-flowered; MALE above; *stamens* 2; *anthers* 2-celled; cells roundish; FEM. below; *ovary* roundish, compressed; *style* short, thick; *stigma* flat, expanded; *utricle* oblong, compressed, nicked, 1 to 5-seeded.—*Leaves* proliferous.

1. *Lemna trisulca.* *Three-lobed duck-meat.*

Roots solitary; *leaves* elliptical, lanceolate, narrow at bottom, sinuated at the tip.

Lenticularia aquatica trisulca, *Raii Syn.* 129, 3.
Hederula aquatica, *Ger. em.* 830.
Ranunculus hederaceus aquaticus, *Park.* 1216.
Lemna trisulca, *Lin. S. P.* 1376.

In ditches and ponds; annual; June.

Leaves pale green, pellucid, forming by prolification a triplipinnate frons.

2. *Lemna minor.* *Small duck-meat.*

Roots solitary; *leaves* ovate, sessile, flattish on both sides.

Lens palustris, *Raii Syn.* 129, 1; *Ger. em.* 829.
Lens palustris seu aquatica vulgaris, *Park.* 1262.
Lemna minor, *Lin. S. P.* 1376.
Common duck-meat.

On ditches and stagnant waters; annual; June and July.

3. *Lemna polyrhiza.* *Many-rooted duck-meat.*

Roots numerous, clustered; *leaves* reverse-ovate, orbicular, sessile, above flat, beneath convex.

Lenticula palustris major, *Dillen. in Raii Syn.* 129, 2.
Lemna polyrhiza, *Lin. S. P.* 1377.

On ditches; annual; July and August.

Leaves large, fleshy, purple underneath.

4. *Lemna gibba.* *Bunched duck-meat.*

Roots solitary; *leaves* reverse-ovate, above flat, beneath hemispherical, reticulated.

Lemna gibba, *Lin. S. P.* 1377.
Lemna minor β, *Hudson Fl. Angl.* 399.

On ditches and stagnant waters; annual; June.

P. 70. 2. *Cyperus Haworthii.* *Haworth's cyperus.*

Culms 3-sided, in tufts, lying down; *umbels* slightly compound; *involucrum* 2-leaved; spikes linear, crowded; *bracteæ* unequal, not half as long as the culm.

Cyperus fuscus, *Hooker Flor. Lond.* fig. too tall and upright.

Culm about 3 inches high, in close tufts.

In damp fields; annual; July and August.

P. 83. After GASTRIDIUM. 94, add

Spathellules 2, lower with one awn at the base, apex 2-cut; upper toothed ..... AGROSTIS. 89.

P. 84. After ARUNDO. 71, add

Lower spathellule bristled; *glume* long; *male flowers* 3-stamened; *hermaph.* 2-stamened ..... HIEROCHLOA. 78.*

And for MONILIA. 76. read ENODIUM. 76.

P. 108. 15.* *Poa stricta.* *Stiff meadow-grass.*

Panicle branched; *locustæ* 3-flowered, ovate; *spathelles* lanceolate, 3-ribbed, nearly equal, pointed, keeled; *spathellules* 5-ribbed, truncated at the tip, villous at bottom.

Poa stricta, *Don in Wern. Tr.*

In pastures.

16. Poa strigosa, in English Harsh meadow-grass.

19. *Poa leptostachya.* *Smoothspiked meadow-grass.*

Panicle small, rather racemelike; pedicell very short, bald; locustæ 2-flowered; *spathelles* lanceolate, pointed, equal, 3-ribbed, bent inwards; *spathellules* lanceolate, rather pointed.

Poa leptostachya, *Don in Wern. Tr.*

On banks of rivers.

P. 110. Change the name of the genus monilia to enodium, there being a genus of nematomyceæ called by the former name, and add

δ. *alpinum*. *Panicle* pale green, slender; *leaves* long; *spathelles* 1-flowered.

P. 135.

XXXVII.* 78.* HIEROCHLOA. Gmel. *Sacred-grass.*

Glume 2-flowered; *spathelles* membranaceous, nearly as long as the glumelles; *spathellules* 2; lower paperlike, mucronate; upper 2-cut, toothed; *side flowers* male, 3-stamened; *middle flower* hermaphrodite, 2-stamened; *lodicule* nearly orbicular; *ovary* beaked; *style* nearly simple; *stigma* bottlebrushlike; *cariopsis* free, not furrowed.—*Panicle* branched.

Hierochloa borealis. *Northern sacred-grass.*

Panicle nearly facing one way; *peduncles* bald; *outer spathellules* fringed on the edge; *awns* 0.

Hierochloa borealis, *Rœmer & Schutz Syst. Veg.* 2, 513.
Holcus odoratus, *Lin. S. P.* 1405.
Hierochloa, *Gmelin Siber.* 1, 101.
Avena odorata, *De Candolle Fl. Gall.* 1565.
Holcus borealis, *Schrader.*
Savastana hirta, *Schrank Fl. Bat.* 1, 337.

In mountain valleys; perennial; July.

Leaves linear, acuminate; *panicle* brownish; hermaphrodite flowret smaller than the males; *locustæ* ovate; *spathelles* ovate, pointed, rather serrated at the point.

P. 168. 23. *Juncus polycephalus.* *Many-headed junk.*

Leaves awlshape, rounded, jointed; *panicle* terminal, upright, 2 or 3-forked; branches seldom divided; heads many-flowered, lateral and terminal, nearly sessile; *sepales* lanceolate, pointed; *capsule* elliptical, ovate, rather blunt, slightly longer than the sepales.

Juncus polycephalus, *Donn.*

On alpine heights.

Heads few but large, 5 to 8-flowered.

P. 176. Phalangium serotinum.

Lyodia alpina, *R. A. Salisbury in Hort. Trans.*

P. 185. Asparageæ, not asparagi.

Peduncles jointed in the middle.

P. 189. Tamaceæ.

Perisperm cartilaginous, hard; *corculum* cylindrical, opposite to the byle.

P. 192. Narcissus pseudonarcissus, *Lin. S. P.* 414.

P. 215. Corallorhiza innata.

Found in Darent Wood, Kent, Aug. 18, 1819, by J. E. Gray.

P. 223. Plantæ exogenæ monochlamydeæ, C. at the end.

Berry; stamens 3 or 9..... EMPETRIDEÆ. 7.*

P. 240. 51.* *Salix Borreri.* *Borrer's willow.*

Leaves oblong, suddenly narrower at each end, beneath bald, glaucous; serratures often wavy; *ovary* pedicelled, awlshape, bald; *style* very long; *stigma* 2-cut.

Salix phylicifolia, *Wahl. Lapp.* 270.

On mountains; shrub; May and June.

Stem bushy; *leaves* much thinner than those of the last species; *rachis* downy.

P. 249. Fam. VII.* 7.* EMPETRIDEÆ.

Flowers unisexual or dioicous, rarely hermaphrodite; *calyx* 3-parted, persistent.—MALE. *Petals* 3, withering; *stamens* 3; *filaments* long; *anthers* 2-parted.—FEM. *Ovary* above, depressed; *style* 0 or very short; *stigmata* 9, turned over, spreading; *berry* spherical, 1-celled; cells 2 or 3-seeded; *seeds* bony; perisperm fleshy; corculum axile; radicle inferior.

15.* EMPETRUM. Remove from p. 401.

P. 254. Xanthium is referred by many to the compositæ.

P. 257, l. 1. For capsules read regma.

P. 269. 2.* *Persicaria interrupta.* *Interrupted peachwort.*

Stem nearly upright; *leaves* lanceolate, wavy, spotless; *stipules* fringed; *spikes* slender, loose, interrupted, nearly upright; *style* appearing 2-cut.

On watery places, near London. A. H. Haworth.

P. 273. 1.* *Lapathum alpinum.* *Alpine dock.*

Leaves ovate, heartshape, blunt, wrinkled; *flowers* polygamous; *sepales* 1 or 2-seedbearing.

Rumex alpinus, *De Cand. Fl. Gall.* 2220.

Mountains, near cowyards; perennial

P. 273, line the last. Add *De Cand. Fl. Gall.* 2223.

P. 277. Oxyria rotundifolia.

Donnia acida, *R. Brown in Ross. Voy.* 1 edit.

P. 295, last line. For spread, read scattered.

P. 296. Limonium commune.

Statice Limonium, *Lin. S. P.* 394.

P. 297. Primulaceæ, End of character, for spreading read scattered; and throughout the synopsis of the genera, for calyx 4, 5, or 7-sepaled read calyx 4, 5, or 7-parted: also add

Calyx 5-parted; *cor.* salvershape;
stam. 5 fert. 5 abortive; *caps.* 5-valved .... SAMOLUS. 63.*
Calyx 5-parted; *corolla* 0;
stamens 5; *capsule* 5-valved ..... GLAUX. 63.**

P. 300. X.* 63.* SAMOLUS. Pliny. *Water-pimpernel.*

Calyx partly adherent, 5-parted, persistent; *corolla* old-fashioned-salvershape, 5-lobed; scales (abortive stamens?) 5 from the divisions of the corolla, threadlike, bent inwards; *stamens* 5, in the bottom of the corolla; *ovary* partly inferior; *capsule* ovate, 1-celled; valves 5, short; placentarium central, free; *seeds* numerous; radicle turned to the hile.—*Leaves* uncut, alternate; *flowers* terminal, racemose, white.

Samolus Valerandi. *Valerandus' water-pimpernel.*

Stem upright.

Samolus Valerandi, *Raii Syn.* 283; *Lin. S. P.* 243.
Anagallis aquatica rotundifolia, *Ger. em.* 620.
Anagallis aquatica tertia Lobelii folio subrotundo non crenato, *Park.* 1237.
Brook-weed.

In marshes; perennial; July.

X.** 63.** GLAUX. Dioscorides. *Glaux.*

Calyx bellshaped, coloured, 5-lobed, lobes turned over; *corolla* 0; *stamens* 5; *capsule* globular, girt by the calyx, 1-celled, 5-valved, 5-seeded; placentarium globular.

Glaux maritima. *Sea-glaux.*

Glaux maritima, *Raii Syn.* 285; *Lin. S. P.* 301.
Glaux maritima minor, *Park.* 1283.
Glaux exigua maritima, *Ger. em.* 562.
Polygonum maritimum, longius radicatum nostras, *Raii Syn.* 161?
Black salt-wort. Sea milk-wort.

In salt marshes; perennial; June and July.

Stem 5 inches long, lying down; *leaves* ovate, fleshy; *flowers* sessile, solitary, axillary, rose-red.

P. 301. Use winter-herb as the English name of trientalis.

P. 307. 13.* *Veronica hirsuta.* *Shaggy speedwell.*

Leaves ovate, lanceolate, pointed, slightly serrated with a few scattered hairs; *stem* lying down, bald at bottom; *flowers* spiked; *capsule* reverse-heartshape, not notched at the end.

Veronica hirsuta, *Hopkins Fl. Glott.* 9.
Veronica setigera, *Don in Wern. Tr.*

On dry heaths; perennial; June.

Stem 3 inches long; *racemes* long, many-flowered; *corolla* bluer and segments narrower in V. officinalis.

13.** *Veronica Allionii.* *Allioni's speedwell.*

Leaves ovate, slightly serrated, stiff, bald; *stem* lying down, bald; *flowers* closely spiked.

Veronica Allionii, *Villars Delph.* 8.

On mountains; perennial; June and July.

Flowers of a brilliant blue.

P. 309. 18.* *Veronica filiformis.* *Threadlike speedwell.*

Flowers solitary; *leaves* heartshape, crenated, shorter than the peduncles; *bracteæ* lanceolate; *peduncles* threadlike, very long.

Veronica filiformis, *Smith Tr. Lin. Soc.* 1, 195.

On banks, on the road to Kew.

P. 378. 5.* *Galeop. micrantha. Smallflowered hedge-nettle.*

Stem hispid; internodes thicker above; *leaves* oval, serrated; *whirls* contiguous; *tube* of the corolla shorter than the calyx; *galea* nearly straight.

On road-sides; annual; July. J. E. Gray.

Stem hairs horizontal; *corolla* white; *calyx teeth* rather short.

P. 401. Ericinæ B. *Anthers* open by 2 slits, not foramens.

P. 401. Chamæcistus.

Anthers open lengthways; *style* upright, enclosed.

P. 401. Empetrum is to be removed to p. 248.

P. 413. Compositæ.

A. Cichoraceæ. *Flowers* semifloscules, hermaphrodite.

B. Cynarocephaleæ. *Flowers* flosculous; *clinanthus* fleshy; *stigma* articulated to the tip of the style.

C. Corymbiferæ. *Flowers* radiated or flosculous; *clinanthus* not fleshy; *stigma* not articulated to the style.

P. 433. 8. *Cirsium pratense.* *Meadow soft-thistle.*

Leaves sessile, lanceolate, wavy, unequally spinous; beneath downy; *flowers* mostly solitary.

Cirsium Anglicum, *Raii Syn.* 193, 1.
Cirsium montanum Anglicum, *Ger. em.* 1183.
Cirsium Anglicum primum, *Park* 961.
Carduus dissectus, *Hudson Angl. ed.* 1, 307, not of Linnæus.
Carduus pratensis, *Hudson Angl.* 353.
Carduus heterophyllus, *Relhan Cant.* 306.
Peckham thistle.

In moist fields; perennial; June.

Root creeping; *stem* 18 inches high; *root-leaves* 3 or 4, petioled; stem-leaves 2 or 3, small, distant, heartshape, embracing the stem; *flower* terminal, drooping, afterwards upright, pale purple.

P. 445, l. 13. For helianthemum read helianthus.

P. 462 & 463. For fleabane read fleawort, as the English name of pulicaria.

P. 491. Ilex is to be removed to celastrinæ, p. 620.

P. 493. Umbelliferæ. Sprengler's arrangement.

1. *Eryngideæ*. *Umbells* nearly headlike. Eryngium, Echinophora, Sanicula.

2. *Hydrocotylineæ*. *Umbells* imperfect; *involucrums* scarcely any or 0; *leaves* nearly simple, running into the petiole. Hydrocotyle.

3. *Bupleurineæ*. *Umbells* nearly perfect; *involucrums* rather broad; *leaves* simple. Bupleurum, Agostana.

4. *Pimpinelleæ*. *Umbells* perfect; *involucrum* universal 0; partial sometimes 0; *fruit* ovate, solid, 5-ribbed; *branches* wandlike; *leaves* compound, or doubly compound. Pimpinella, Sium, Ægopodium, Phellandrum, Carui, Silaus, Œnanthe, Apium, Petroselinum, Meum, Fœniculum.

5. *Smyrniæ*. *Involucrums* mostly 0; *fruit* barked and solid, or compressed and utriculated. Smyrnium, Crithmum, Coriandrum, Cicuta, Æthusa, Pseudospermum, Tordylium, Thysselinum.

6. *Caucalineæ*. *Umbells* various; *involucrum* whole or many-leaved; *fruit* armed, shaggy. Turgenia, Caucalis, Daucus, Torilis, Libanotis.

7. *Scandicineæ*. *Umbells* various; *involucrums* 0; *fruit* pyramidal, beaked. Scandix, Myrrhis, Chærophyllum, Cerefolium, Anthriscus.

8. *Ammineæ*. *Umbells* and *involucrums* various, *fruit* rather ovate, ribbed, furrowed. Sium, Drepanophyllum, Bunium, Conium, Ligusticum.

9. *Selineæ*. *Umbells* and *involucrums* various; *fruit* compressed, flat, often winged. Peucedanum, Spondylium, Pastinaca, Angelica, Imperatoria.

P. 504. 3. *Chærophyl. aromaticum*. *Scented cow-parsley*. *Stem* slightly downy at bottom, bald at top; *leaves* biternate; leaflets ovate, oblong, rather pointed, serrated, undivided.

Chærophyllum aromaticum, *Jacq. Austr.* 140; *Don Scot. Pl.* 7.

On road-sides; perennial; June.

Stem 3 feet high; *odour* heavy but aromatic.

P. 545, l. 3 from bottom. For adenaria marina read adenarium marinum.—And use glandwort for the English name, instead of sandwort.

P. 554. Ceratophyllæ.

Stamens twice as many as the lobes of the calyx; *seed* upright, not pendulous.

P. 589. Spiræa odorata.

Spiræa Ulmaria, *Lin. S. P.* 702.

P. 598. Trifolium glomeratum.

Trifolium glomeratum, *Lin. S. P.* 1084.

P. 609. Leguminosæ C.

Style pubescent beneath the stigma.

P. 613. 1.* *Orobus niger.* *Black peaseling.*

Leaves pinnate, 4 to 6-paired; leaflets ovate or elliptical; *stem* branched, angular, upright.

Orobus niger, *Lin. S. P.* 1028.

In woods; perennial.

P. 619. Celastrinæ.

Styles 4; *nuculanium* 1-celled;
pyrenæ 4, streaked, 1-seeded ..... ILEX. 382.*

P. 620. III. 382.* ILEX. Remove from p. 491.

P. 630. Geranieæ C.

Capsule 5-celled, not 5.

P. 650. Change the name of the genus Elatine into Willisellus; there being a genus of scrofularinæ bearing the former name in p. 321.

P. 661. Cistineæ.

Corculum surrounded by a slightly fleshy perisperm; *radicle* opposite to the hile.

P. 680. 3. *Erysimum orientale.* *Eastern hedge-mustard.*

Remove brassica orientalis, from p. 685, hither.

P. 685. Brassica orientalis, remove to erysimum, p 680.

P. 700. Fumaria capreolata.

Fumaria capreolata, *Smith Fl. Brit.* 2, 751, not of Linnæus.

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